

EVALUATION

BASA PILIPINAS IMPACT EVALUATION: MIDLINE REPORT

September 2016

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ACRONYMS

BEIS	Basic Education Information System
DepEd	Philippines Department of Education
EDC	Education Development Center
EGMA	Early Grade Math Assessment
EGRA	Early Grade Reading Assessment
ICC	Intra-Cluster Correlation
IE	Impact Evaluation
IRR	Inter-Rater Reliability
LAC	Learning Action Cells
MTBMLE	Mother Tongue-Based Multi-Lingual Education
NAT	National Achievement Test
ORF	Oral Reading Fluency
PSM	Propensity Score Matching
PTA	Parent Teacher Association
SI	Social Impact
TNS	Taylor Nelson Sofres
USAID	United States Agency for International Development
USG	United States Government

EXECUTIVE SUMMARY

While 97% of Filipinos have basic literacy, only 86% are functionally literate. One of the main challenges to achieving higher levels of literacy has been that the primary education system in the Philippines has previously focused on reading in English and Filipino; however, teaching children to read only in languages that they do not speak at home can pose a substantial barrier for children who already struggle to learn to read.

To address this, the Philippine Department of Education (DepEd) officially adopted the implementation of mother tongue-based multi-lingual education (MTBMLE). The 2014-2015 school year represents the first school year in which all public schools are implementing MTBMLE in grades K-3. USAID is assisting this effort through the Basa Pilipinas program, a four-year early grade reading intervention designed to support DepEd's MTBMLE initiative.

USAID/Philippines has commissioned Social Impact (SI) to conduct a rigorous impact evaluation (IE) of the Basa Pilipinas program to measure its impact and cost-effectiveness as an early grade reading intervention, in the context of MTBMLE. The IE sets out to answer the following two main evaluation questions:

- 1- What is the impact on reading proficiency and comprehension of early grade Basa supported reading interventions relative to non-Basa supported early grade reading interventions?
- 2- Do any positive impacts of Basa justify additional funding?

While previous studies have examined the effects of mother tongue multilingual education, this evaluation will focus on evaluating the incremental effect of USAID-led programming to support DepEd's MTBMLE program activities and cost analysis of the intervention. This research will serve as an accountability mechanism that will measure the extent to which USG investment has led to literacy gains, will contribute to the literature on effectiveness of reading programs supporting MTBMLE, and, combined with results of evaluations of other USAID-sponsored projects in Peru and Guatemala, will provide evidence from various contexts.

This IE uses a quasi-experimental design to isolate the effect of Basa-supported early grade reading relative to non-Basa supported reading interventions (henceforth referred to as Standard MTBMLE). Under this design, students in Basa (treatment) schools and similar students in Standard MTBMLE (comparison) schools are selected for participation in the evaluation using a two-step sampling and matching methodology. The first step involves identifying matched treatment and comparison schools, while the second step entails controlling for differences in baseline characteristics and reading levels of randomly sampled students from the matched treatment and comparison schools. All schools and students are sampled from Region I and Region 7.

Based on assumptions from baseline and project data, the study expects to be able to measure a 0.17 standard deviation difference in reading comprehension scores between Basa and non-Basa students across all grades combined at the end of the 2015-2016 and 2016-2017 school years.

Data are being collected longitudinally at three points in time from a panel of Basa and non-Basa students. Data include: reading assessments, principal interviews, classroom observations, teacher interviews, and household surveys. Baseline data were collected from September-October 2015, midline data were collected between February-March 2016, and endline data collection will be collected in February-March 2017.

Findings

As of midline we observe a non-response rate of 4.4%, which is consistent with the expected 5% rate and well below the 16.67% attrition threshold needed to maintain the study's intended power.

Basa students are meeting or exceeding targets for oral reading fluency benchmarks for Ilokano, while comparison students fall short of these targets at the end of the 2015/2016 school year. Basa students also outperform comparison students in Ilokano reading comprehension targets. Basa and comparison students both attained the 40 words per minute oral reading fluency benchmark, but fell short of the 60 words per minute benchmark. They showed similar progress toward reading comprehension benchmarks. Basa and comparison students show similar progress toward DepEd targets for Filipino and English in Grades 2 and 3.

Grade 1 EGRA assessments in mother tongue show sizeable gains over the course of the school year for both Basa and Standard MTBMLE students, including sizeable reductions in zero scores, especially for reading comprehension. There are positive and significant treatment effects in the letter sounds subtest (5.12 additional items correct per minute), while results are null for all other subtests. Sex disaggregated results reveal positive and statistically significant impacts for girls in the letters, oral reading fluency, and reading comprehension, and no significant impacts for boys.

Among Grade 2 students, despite significant gains in both groups, treatment effects are null for all Filipino subtests as well as English letter sounds, familiar words, unfamiliar words, and oral reading fluency; however, we observe a significant positive treatment effects for English reading comprehension, where Basa students improved by 11 percentage points relative to comparison students. There were no significant treatment effects among Grade 3 students in any of the Filipino or English subtests.

Similar to EGRA results, most EGMA results also show null treatment effects, with the exceptions of Grade 1 word problems and Grade 2 number identification. Basa students had statistically significantly higher scores in both of these subtests.

Regression analysis of the predictors of reading outcomes as measured by oral reading fluency finds that sex, region, and EGMA scores are all highly significantly related to ORF scores ($p < 0.01$), with female students and students from Region 7 scoring higher than male students and students from Region 1. Other significant predictors, depending on the grade and language analyzed, include kindergarten attendance, homework completion, age of child when first read to, household assets, school enrollment, teacher experience, and class size.

At the school level, Basa schools are much more likely to participate in Learning Action Cells at midline than standard MTBMLE schools, though they convene less frequently. They are also much more likely to have a sufficient number of textbooks for Grade 1, Grade 2, and Grade 3. However, principals in Basa schools are statistically significantly less likely to observe a classroom 2-3 times per week or more than principals in Standard MTBMLE schools, and Basa schools reported a statistically significantly lower fraction of Grade 2 teachers trained in MTBMLE.

At the classroom level, teachers at Basa schools were more likely to have attended early grade reading training than equivalent peers at comparison schools. Teachers at Basa schools are significantly more familiar with grammar and the alphabet in the local mother tongue, as well as more comfortable providing mother tongue instruction. Although teachers report the same prevalence of textbooks in mother tongue in their classroom, teachers in Basa schools report significantly more other learning materials in mother tongue.

Finally, observations of teacher behavior along several dimensions of best-practice general and reading-specific teaching behaviors showed significant decreases by both treatment and control schools from baseline to midline. Regression analysis shows negative treatment effects on general teaching behaviors, some of which are statistically significant. Specifically, we observe statistically significantly negative treatment effects for all items that measure providing students with opportunities for reflection and application. On the other hand, teachers at Basa schools are either similarly likely or significantly more likely to exhibit reading-specific behaviors of interest on most items. A Basa teacher is 1.9 to 2.6 times more likely than an equivalent teacher at a comparison school to ask questions to assess listening comprehension, provide instructions for decoding words, or ask a learner to recite the alphabet. However, Basa teachers were statistically significantly less likely to use multiple methods for developing reading comprehension skills.

Conclusions

Based on these findings, we conclude the following:

- Both Basa and Standard MTBMLE students attained considerable gains in all subtests across all languages and grades from baseline (beginning of the school year) to midline (end of the school year), including substantial progress toward DepEd targets.
- Basa students perform statistically similarly to Standard MTBMLE students on most subtests, with the exceptions of Grade 1 letter sounds correct per minute and Grade 2 reading comprehension, where Basa students experience statistically significantly greater gains than Standard MTBMLE students.
- Girls continue to perform significantly better than boys in oral reading fluency across grades 1-3 by between 6 and 13 words per minute. Other important predictors of oral reading fluency are: region, math score, Kindergarten attendance, doing homework, reading at home from a younger age, and household assets (a measure of household wealth).
- Attending a school with higher enrollment and higher grades of instruction, smaller class sizes, and having a teacher with more teaching experience also significantly predict higher oral reading fluency scores.
- Basa principals were much more likely to report having sufficient textbooks in mother tongue, Filipino, and English, and much more likely to be reported to participate in LACs. In contrast, Basa teachers report having similar numbers of learner's manuals as teachers at Standard MTBMLE schools, but significantly more other reading materials.
- Basa schools reported lower percentages of Grade 2 teachers trained in MTBMLE at midline than baseline, and lower than Standard MTBMLE schools. Moreover, Basa principals reported observing classrooms and checking teacher lesson plans less frequently at midline than baseline, and at midline, Basa principals report observing classrooms statistically significantly less than Standard MTBMLE principals.
- Though Basa and Standard MTBMLE teachers report similar levels of training on early grade reading instruction, including in mother tongue, Basa teachers report being significantly more familiar with the mother tongue alphabet and grammar rules and more comfortable teaching in mother tongue, which perhaps lends support to the greater efficacy of the Basa teacher training relative to Standard MTBMLE.

- Teacher observation data indicate that both Basa and Standard MTBMLE teachers exhibit fewer teaching best practices at midline than baseline. Moreover, Basa teachers score statistically significantly lower than Standard MTBMLE teachers on the general teaching behavior index and sub-items but generally higher on reading specific teaching behaviors.
- The Basa cost analysis is designed to assess Basa as a supplementary strategy implemented alongside DepEd standard, or the marginal cost-effectiveness of Basa. The marginal cost-effectiveness ratio will be the average per-student costs that need to be added to the standard MTBMLE program to produce a one unit increment in reading test scores. Ingredients for the standard MTBLE program will not be formally costed, but they will be used to support necessary assumptions.

I. INTRODUCTION

Early grade literacy acquisition is critically important to both individual and national development. Not only does learning to read facilitate educational development and broaden the range of economic and other learning possibilities; it empowers the learner and leads to positive externalities in health and civic participation.¹ While 97% of Filipinos have basic literacy, only 86% are functionally literate. One of the main challenges to achieving higher levels of literacy has been that the primary education system in the Philippines has previously focused on reading in English and Filipino; however, teaching children to read in languages that they do not speak at home can pose a substantial barrier for children who already struggle to learn to read.²

To address this, the Philippine Department of Education (DepEd) officially adopted the implementation of mother tongue-based multi-lingual education (MTBMLE) across the Philippines at all levels of education, through the 2009 DepEd order 74 and the 2010 Strategic Plan for implementation of MTBMLE.³ The Enhanced Basic Education Act of 2013 lent further support to these policies by setting the language of literacy and the primary language of instruction as the mother tongue⁴ nationwide. The 2014-2015 school year represents the first in which all public schools are implementing MTBMLE in grades K-3.⁵ The use of mother tongue language and introduction of Filipino and subsequently English is shown in Figure 1.

Figure 1: National Curriculum Standards for Reading

Grade	Mother tongue	Filipino	English
Kindergarten	<ul style="list-style-type: none"> Oral fluency Pre-reading activities Medium of instruction 	-	-
Grade 1	<ul style="list-style-type: none"> Oral fluency Academic vocabulary Reading and writing Medium of instruction 	<ul style="list-style-type: none"> Oral (listening and speaking) in Q2 Reading (Q4) 	<ul style="list-style-type: none"> Oral (listening and speaking) in Q3
Grade 2	<ul style="list-style-type: none"> Oral fluency Literacy development Medium of instruction 	<ul style="list-style-type: none"> Oral (communicative competence) Literacy development 	<ul style="list-style-type: none"> Oral (communicative competence) Reading (Q2)
Grade 3	<ul style="list-style-type: none"> Oral fluency Literacy development Medium of instruction for most subjects 	<ul style="list-style-type: none"> Oral (communicative competence) Literacy development Medium of instruction for some subjects (Q1) 	<ul style="list-style-type: none"> Oral (communicative competence) Literacy development Medium of instruction for some subjects (Q3)

¹ Hanushek, Erik and Woessmann, Ludger (2008). *The Role of Cognitive Skills in Economic Development*. Journal of Economic Literature 2008, 46(3). <<http://hanushek.stanford.edu/publications/role-cognitive-skills-economic-development>>.

² World Bank (June 2005). *In Their Own Language...Education for All*.

<http://siteresources.worldbank.org/EDUCATION/Resources/Education-4_Notes/EdNotes_Lang_of_Instruct.pdf>

³ Lorente, Beatrice et al. (2011). *A new politics of language in the Philippines: Bilingual education and the new challenge of the mother tongues*.

http://www.academia.edu/1456781/A_new_politics_of_language_in_the_Philippines_bilingual_education_and_the_new_challenge_of_the_mother_tongues#

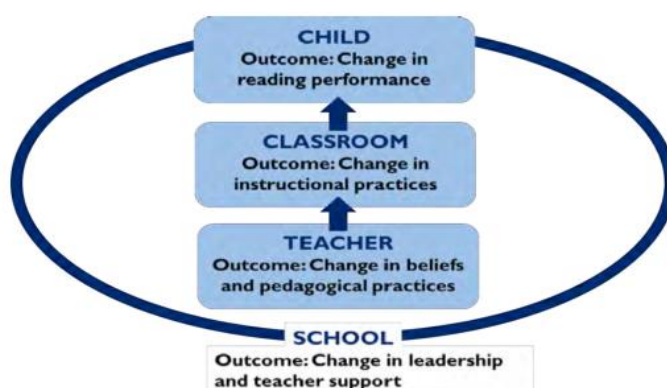
⁴ Santiago, Paul Julian (2013) *Current issues in the implementation of the Mother Tongue Based Multilingual Education in the Philippines*. <https://www.academia.edu/4761433/Current_Issues_in_the_Implementation_of_the_Mother-Tongue_Based_Multilingual_Education_Program_in_the_Philippines>

⁵ Ibid.

Development Intervention

USAID is building on its ongoing assistance to the education sector in the Philippines, with a special focus on early grade reading, currently collaborating with the DepEd to implement the Basa Pilipinas program. This four-year program is an early grade reading intervention designed to support DepEd's MTBMLE initiative, using a multifaceted education development approach. The Basa program is comprised of three main components: teacher training, improved instructional materials, and strengthened delivery systems. Within these components are various additional activities aimed to improve early grade reading ability, including: mentoring programs, development of a reading instruction training plan that defines which skills teachers should teach at each level and identification of appropriate grade level texts, and locally based activities such as a National Reading Month to promote reading across the country. As such, the intervention represents a blended strategy aiming to address directly the challenges to classroom-based MTBMLE reading instruction across grades 1 through 3.

Figure 2: Basa Pilipinas Theory of Change



The program began in January 2013 and will continue through December 2016, implementing in five provinces in the Philippines: Cebu, La Union, Ilocos Norte, Ilocos Sur, and Bohol.

Evaluation Purpose and Evaluation Questions

USAID/Philippines has commissioned an impact evaluation (IE) of the Basa program to measure its impact and cost-effectiveness as an early grade reading intervention, in the context of MTBMLE. The IE (and cost analysis) of Basa will be used by USAID, DepEd, and other key stakeholders in the Philippines as the basis for policy and programming decisions about how reading interventions in support of MTBMLE can best be structured and implemented to improve early grade learning outcomes.

USAID/Philippines has articulated the following two main evaluation questions:

- 1- What is the impact on reading proficiency and comprehension of early grade Basa supported reading interventions relative to non-Basa supported early grade reading interventions?
- 2- Do any positive impacts of Basa justify additional funding?

While previous studies have examined the effects of mother tongue multilingual education, this evaluation will focus on evaluating the incremental effect of USAID-led programming to support DepEd's MTBMLE program activities (including USAID's teacher-trainings, reading materials, and delivery systems of MTBMLE) and cost analysis of the intervention. Moreover, this evaluation will rigorously explore the extent to which any reading gains generated by Basa are associated with improvements in math outcomes.

Though the Basa program is a literary program and is not expected to generate changes in numeracy (and accordingly is not being evaluated according to numeracy outcomes), it has been theorized that improved literacy outcomes may lead to improved numeracy outcomes. Moreover, by including math assessments at baseline, the evaluation will be able to control for additional variance in reading outcomes, improving the evaluation power.

This research will serve as an accountability mechanism that will measure the extent to which USAID investment has led to literacy gains, will contribute to the literature on effectiveness of reading programs supporting MTBMLE, and, combined with results of evaluations of other USAID-sponsored projects in Peru and Guatemala, will provide evidence from various contexts. Ultimately, the IE will yield important information to inform how mother tongue reading programs can be best implemented, providing data for USAID and the Philippines government to make evidence-based decisions about effective programming to improve learner reading achievement and access to education.

II. IMPACT EVALUATION METHODOLOGY

This IE uses a quasi-experimental design to isolate the effect of Basa-supported early grade reading relative to non-Basa supported reading interventions (henceforth referred to as ‘standard’ MTBMLE). Under this design, students in Basa (treatment) schools and similar students in ‘standard’ MTBMLE (comparison) schools are selected for participation in the evaluation using a two-step sampling and matching methodology. The first step involves identifying matched treatment and comparison schools, while the second step entails controlling for differences between randomly sampled students within these treatment and comparison schools.

School Sampling and Matching

While comparing students from the same schools, or from schools in the same school division⁶, would be preferred, Basa is implemented in all classrooms in all schools in the selected divisions. Accordingly, to construct a comparison group, we identify students from similar schools using the same mother tongue from nearby divisions through the following two steps.

1. Restriction of eligible schools and sampling

Schools that have already been randomly selected by EDC for testing were excluded to avoid overburdening these schools. Excluding these schools should not affect the validity of the study in any way since these schools were randomly selected and represent only a small percentage of Basa schools. Additionally, however, two more groups of schools were excluded which will slightly reduce the external validity of the evaluation. First, the 100 lowest performing schools in each region must be excluded as Basa has been requested by DepEd to provide streamlined support to the schools⁷. Second, there are 15 additional schools where DepEd has requested that Basa conduct additional research. These schools were also excluded to avoid overburdening students and teachers at these schools. Both of these changes are expected to slightly reduce the external validity of the evaluation. Finally, schools that do not use Ilocano or Cebuano as mother tongues were excluded (see Annex II-Sampled Schools for the list of sampled schools).⁸

2. School Matching

After applying the restrictions above, propensity scores were calculated for all possible treatment and comparison schools using the following secondary data sources:

- National Achievement Test (NAT) data: student testing data from 2011-2015;
- Basic Education Information System (BEIS) data: data collected from schools annually by DepEd on items such as enrollment, teachers, and school facilities; and
- Census data: obtained at the municipality-level from the 2010 census.

⁶ DepEd organizes schools within a province into school divisions.

⁷ The full Basa program is not implemented in these schools. Moreover, the sample size is too small to attempt to identify the additional impact of this streamlined approach, particularly considering the strict targeting of these schools and the resultant selection bias.

⁸ Verifications were done by obtaining lists of schools using Ilocano and Cebuano as mother tongue from divisions. Data collected at schools confirm that all of sampled schools use Ilocano or Cebuano as the mother tongue and that they are using mother tongue as the primary Language of Instruction (LOI) in early grades, in accordance with DepEd guidance.

Generating propensity scores for all schools in the evaluation sample frame models the Basa selection process, identifying which secondary data are associated with participation in the program. This process allows for efficient matching of schools along a wide range of variables related to program participation.

Next, all Basa schools were stratified by province, and 120 Basa schools were selected with probability proportional to grade 1-3 enrollment and the number of schools sampled from each province also proportional to the Basa grade 1-3 enrolment in that province. Finally, to select comparison schools, each Basa school was matched by propensity score to its nearest comparison school (without replacement), yielding 120 comparison schools. Table 1 shows the final outcome of the school sampling by Province.

Table 1: Sampled Schools

	Province	Treatment	Comparison	Total
Region I	Ilocos Norte	8	10	18
	Ilocos Sur	10	3	13
	La Union	14	0	14
	Pangasinan	0	20	20
Region 7	Bohol	30	0	30
	Cebu	60	14	74
	Negros Oriental	0	44	44
	Siquijor	0	31	31
	Total	122	122	244

Student Sampling

Six students per grade from grades 1-3 were randomly sampled from each treatment and comparison school for participation in the evaluation. The random student sampling procedure involves two steps. First, in schools where there are more than one classrooms per grade, one classroom per grade is randomly selected using a Kish grid.⁹ Second, using the enrollment records for the sampled classrooms, a random start and sampling interval are calculated and used to randomly sample 3 female and 3 male students per grade.¹⁰

To make the treatment and comparison groups as similar as possible, we analytically control for differences in student demographics, household characteristics, as well as teacher and school characteristics across multiple regression models.¹¹

⁹ A Kish grid is a table of random numbers with pre-assigned number selection used for random sampling. All elements in a population, classrooms in the case, are listed on the Kish grid. Following the number selection on the Kish grid, a classroom is selected.

¹⁰ Replacement students were also sampled for absences or refusals.

¹¹ Refer to the Data Analysis section for greater detail on the analytical approach.

Sample Size Calculation and Power Analysis

The IE is sufficiently powered to measure a 0.17 SD difference¹² in reading fluency and comprehension scores between Basa and non-Basa students across all grades combined, at the end of the 2015-2016 and 2016-2017 school years. This MDES was benchmarked against the smallest effect size (0.17 SD) EDC measured in their 2015 evaluation report, indicating that the sample should be sufficient to measure EDC's anticipated changes for the grades taken together, with a high degree of confidence.¹³ Accordingly, the sampling approach and sample size is sufficient to allow the team to confidently measure the changes anticipated by the Basa program. See Annex V-Power Calculations for details.

Data Collection

Data are being collected longitudinally at three points in time from a panel of Basa and non-Basa students. Data include: reading assessments, principal interviews, classroom observations, teacher interviews, and household surveys. Baseline data were collected from September-October 2015, midline data were collected between February-March 2016, and endline data collection will be collected in February-March 2017.¹⁴

Table 2: Sample Sizes for School-based Baseline Data Collection

	Grade 1	Grade 2	Grade 3	Total
Students	1,440	1,440	1,440	4,320
Teachers	240	240	240	720
Administrators	-	-	-	240

Student Learning Assessments

Learning assessments are being used to measure changes in student learning outcomes. SI is using Early Grade Reading Assessments (EGRA) designed and tested by RTI in Cebuano, Ilokano, Filipino, and English, and Early Grade Math Assessments (EGMA) in mother tongue designed and tested by DepEd. Baseline pilot results revealed ceiling effects¹⁵ of the Filipino tool with Grade 3 students. To address the ceiling effects, the evaluation team developed a more challenging Filipino reading passage and associated comprehension questions. For the final round of data collection in February/March 2017, the evaluation team will pilot the Grade 3 Filipino and Grade 2/3 English instruments with Grade 4 students to determine whether or not a more challenging version of either of these are needed for Grade 4 students.

Learning assessments are being administered electronically using tablets and the RTI-developed Tangerine software platform, following the standard EGRA and EMGA protocols. The following learning assessments are being administered for this impact evaluation:

- Student Grade 1 EGRA in mother-tongue

¹² An MDES of 0.2 SD is generally considered small. Meaning that a study that can measure a 0.2 SD change is generally considered highly powered (as it can detect what is commonly considered to be relatively small changes between a treatment and control group).

¹³ For each individual grade cohort, we expect to be able to measure a change of at least 0.21 SD.

¹⁴ Data are collected from schools in the same order for each round of data collection to ensure consistency.

¹⁵ Ceiling effects occur when there is an artificial upper limit on the possible values for a variable and participants score at or near this limit, restricting the variation in scores. In the context of an impact evaluation, if a student scores very high at baseline, it limits the ability to capture positive gains at follow-up.

- Student Grade 2 EGRA in Filipino & English
- Student Grade 3 EGRA in Filipino & English
- Student Grade 1, 2, and 3 EGMA in mother-tongue

Teacher Survey and Teacher Observation

Teachers from sampled classrooms were interviewed to gather information on teacher characteristics, experience, and exposure to training and Basa materials. A teacher observation protocol was also developed, based on tools used successfully by SI in other early grade reading evaluations, to complement the teacher survey. The observation tool includes generally recognized good teaching practices across all subjects as well as widely recognized practices that are considered beneficial specifically for reading instruction. Besides teaching practices, the observation tool also captures observations regarding equal treatment of learners, presence of classroom resources, and student behavior.

Each surveyed teacher's classroom was observed three times in the school day, with priority given to language classes, in twenty minute increments to capture teacher instructional practices and the literacy environment. The classroom observations were conducted by enumerators who were thoroughly and consistently trained on how to recognize each of the practices according to agreed-upon standards. See Annex IV-Instruments for the teacher survey and teacher observation instrument.

Administrator Survey

SI administered surveys to the school administrator of sampled schools to gather data on a variety of school characteristics, including student enrollment and attendance and school facilities and resources. The administrator survey is included in Annex IV-Instruments.

Household Data

SI developed a household survey to capture socio-economic characteristics of student households at baseline. The household survey was administered to the primary caregiver of the students in the sample. Household contact information were obtained from the school administrator and teachers. The data collection partner visited the households of participating students, obtained informed consent, and then interviewed the primary caregiver of the child. See Annex IV-Instruments for the household survey instrument.

Enumerator Training

SI contracted Taylor Nelson Sofres (TNS) Philippines as our data collection partner for the Basa Pilipinas IE. TNS Philippines has extensive experience in social and market research, and is experienced in school-based data collection, having carried out data collection for both the PhilEd and Basa EDC projects. TNS was also responsible for data collection at baseline. TNS and SI conducted two regionally-based trainings and school practice tests in Region I and Region 7. Training for Region I took place from January 25-29 and consisted of review of all instruments, mock assessments and interviews, introduction of the study and obtaining informed consent, sampling, inter-rater reliability (IRR) tests, and two days of field practice in practice schools. This same training was replicated in Region 7 from February 1-5. An SI team member participated in both trainings to provide support and oversight.

At baseline, inter-rater reliability (IRR) tests were conducted during enumerator training. At midline, in accordance with the updated guidance in the USAID EGRA Toolkit 2.0, SI also collected and analyzed IRR data over the course of fieldwork. Field IRRs were implemented for the first set of students assessed each day of fieldwork, alternating between grades 1-3. During the first two weeks of fieldwork, SI analyzed IRR results overnight and submitted results to the field teams for debriefing the next day.

Table 3 presents the final IRR results for each region, with each entry representing the percent of questions for which the observing and scoring enumerators scored identically. Each round consists of several fieldwork days over which IRR results were analyzed. Although 6 enumerators analyzed in the first round had less than 90% agreement, this figure decreased to only 1 in the second round. By the third and fourth round, all enumerators had over 90% agreement.

Table 3: Assessment IRR Results

	Region 1			Region 7		
	G1	G2	G3	G1	G2	G3
Round 1	92%	95%	94%	96%	84%	96%
Round 2	98%	96%	99%	95%	97%	97%
Round 3	99%	99%	96%	98%	96%	97%
Round 4	99%	99%	98%	98%	98%	99%

Data Analysis

EGRA and EGMA data have been analyzed using a multivariate Tobit regression model to measure: 1) effects of the Basa program on student learning outcomes, and 2) student, household and school predictors of reading outcomes. Tobit analysis was selected to account for flooring effects of reading assessment results resulting from zero scores. Impact estimates were calculated using the difference-in-difference approach, controlling for the student, household, and school-level variables outlined above, using each of the EGRA and EGMA subtests as dependent variables. The evaluation team also implemented robustness checks using other model specifications, including models that control for schools who had teachers participating in the DepEd Early Language Literacy and Numeracy (ELLN) program¹⁶ (see Annex IV). Impact estimates obtained from these additional models are consistent with estimates obtained from the DiD model, with a few exceptions, and thus confirm the validity of the impact estimates obtained from the DiD model. Baseline and midline scores and regression results for each group are presented using sample weights to more accurately represent the entire population of Basa schools.

School and teacher-level outcome variables were analyzed using multivariate ordinary least squares (OLS), logistic, and order logistic regression models.¹⁷ These models were run on the midline data alone as a cross-section, as many potential control variables collected at baseline could have already been influenced by the Basa program. Odds ratios are a way to interpret the coefficients of a logistic regression.¹⁸ An odds ratio greater than 1 indicates that the odds are more likely that the treatment had a positive effect on a given outcome, whereas an odds ratio less than 1 indicates that the treatment likely had a negative effect on a given outcome. Odds ratios close to one indicate no treatment effect (positive or negative). In contrast, in an OLS regression coefficient, a negative number denotes a negative treatment effect while a

¹⁶ The IE team discovered that 22 of our 124 comparison schools received additional training support from DepEd's ELLN program. To investigate any potential effects of this training on the findings from this IE, the team undertook additional analyses controlling for ELLN participation and excluding ELLN schools from the sample. These additional analyses yield similar treatment effect estimates (see Annex IV).

¹⁷ Where the outcomes of interest are continuous variables, these coefficients are from a standard OLS regression. They indicate the effect in terms of the units of the outcome variable. Where the outcomes of interest are binary, such as whether or not a principal checks a teacher lesson plan, these coefficients are from a logit model and represent the odds ratio (OR) of the outcome of interest being true for a principal at a Basa school compared to a principal at a comparison school.

¹⁸ Defined as the ratio of the probability of success and the probability of failure.

positive number indicates a positive treatment effect.

Limitations

There are four main potential limitations to this IE. First, and related to external validity, given that some treatment schools were excluded from the evaluation sample frame, the Basa evaluation sample may not be fully representative of the Basa intervention schools. However, given that the non-randomly excluded schools are a small percentage (11%) of Basa schools, we do not expect this to significantly affect generalizability. Moreover, we can test the similarity of the Basa IE sample with the random sample of Basa schools tested by EDC, as well as compare the evaluation sample (both Basa and non-Basa) against all schools nationally (using LAPG, historical NAT data, and BEIS data) to determine how representative the evaluation sample is of Basa schools and schools nationally.

Second, given the timing of the start of the evaluation contract, baseline data were collected in September and October, though the school year starts in June. We will explore with implementers and teachers in our qualitative data collection the extent of implementation and expected effects in these first few months of school. To the extent that Basa generates significant reading improvements in the first 1-2 months of schools (relative to the gains generated under the standard approach), the values reported here may be biased estimates of the true baseline values.

Third, since the Basa program has already begun implementation in target schools, including up to two years of implementation in some areas, the evaluation baseline data collection cannot be considered a pre-intervention measurement at the school level. However, at the student level, the design still allows for measurement of both the first and second year of participation in Basa. For Grade 1 students, this will serve as a baseline for the students at the start of their participation in the Basa program, and the outcome measurement will estimate the effect of the first year of Basa participation for Grade 1 students. Grade 2 and 3 students in treatment schools will already have participated in Basa for one year or two years. Accordingly, outcome measurement for this group will measure the incremental effect of the second (or third) year of participation in the program.

Fourth, the length of time between baseline and follow-up data collection is relatively short for this midline report, since baseline data collection took place in September and October, and midline in February and March. This timeline meant just 5 months between baseline and midline, which is a relatively short period of time for observing impacts. The final round of follow-up data collection provides additional time for outcomes to be observed.

III. COST ANALYSIS METHODOLOGY

Social Impact (SI) is undertaking a cost analysis to assess the cost-effectiveness of Basa and whether any positive impacts justify additional funding (see Annex IV-Cost Analysis Framework). The results of the cost analysis will be presented in an investment case that provides a policy and context-relevant assessment of the merits of additional Basa funding. As MTBMLE instruction is now a fully implemented policy in the Philippines, the investment case examines the merits of additional funding for Basa as a supplementary (or marginal) strategy to standard MTBMLE. Precisely because the program is a supplementary approach, the Basa cost-effectiveness (C-E) analysis and investment case refers to the MTBMLE plus Basa approach.

The elements of the investment case include:

1. A detailed description of Basa's marginal costs;
2. Estimates of the marginal cost-effectiveness of Basa; and
3. A forward looking assessment of resources and funding required under alternative expansion scenarios developed with stakeholders.

This cost analysis assesses the relationship between Basa marginal costs and marginal outcomes (i.e. gains in reading scores) using C-E analysis, an ex-post evaluation tool that enables decision makers to assess two or more courses of action by comparing their relative costs and outcomes. The marginal C-E ratio for Basa will provide the average per-student costs that need to be added to the standard MTBMLE program, to produce an incremental gain in reading test scores.¹⁹

Step 1: Estimating Basa marginal costs

An ingredients approach will be utilized for estimating Basa's costs.²⁰ The approach consists of dissecting an intervention in its different components and activities, specifying all the ingredients or resources required to create or replicate each activity, costing or placing a monetary value to the ingredients, and obtaining the total unit costs of the intervention.

Based on project document review, SI developed a Basa Marginal Costs Worksheet, which list project components and activities. This list is being refined with the Basa implementation team at the time of this report. Once complete, the Worksheet will contain a full list and description of project components, activities, and inputs (ingredients), as well as costs for each ingredient. Once all ingredients have been costed, the evaluation team will calculate average unit costs (i.e. costs per student) to be compared with Basa impact estimates obtained through this impact evaluation.

Step 2: Elaborating estimates of marginal cost-effectiveness (C-E)

Building on the analysis of marginal costs in step 1 of EQ2 and using gains in reading comprehension scores obtained from EQ1, SI will estimate C-E ratios for Basa. These ratios will be expressed as the costs and

¹⁹ The evaluation team will have flexibility in how an increment is defined, which can be defined through discussions with USAID and DepEd at the start of endline data analysis.

²⁰ The ingredients approach is taken from Levin (1985) and Levin and Belfield (2010), and adapted for the Basa evaluation. The authors have used the approach for the cost-effectiveness evaluation of similar programs, for example early reading programs in the United States (Hollands et al., 2016).

outcomes of the additional Basa approach relative to the standard MTBMLE program, or the marginal C-E ratios. Costs will be expressed as the per-student cost of Basa inputs.²¹ The marginal C-E ratio will, therefore, represent the average additional per-student costs required to produce a unit increase in early grade reading.

A very high marginal C-E ratio or no difference in reading outcomes could be interpreted as evidence against the benefit of continuing or expanding Basa in its current form. However short of these extreme results, the case for or against additional funding may not be clear. Depending on the marginal costs of Basa and the magnitude of differences in reading outcomes it would be conceivable that the standard MTBMLE produced year on year gains in reading ability at a similar or lower cost than Basa, even if Basa demonstrated a treatment effect of higher reading scores.²²

The SI team will consider reading outcomes across each of the EGRA subtests—letter sounds, familiar words, unfamiliar word decoding, oral reading, and reading comprehension. Marginal C-E ratios will be present in a descriptive table, comparing ratios for the different outcomes.

Step 3: Assessing the investment case for additional funding

Evaluating the marginal cost-effectiveness of Basa implementation to date is a key decision point in assessing the merits of expanding of the program. A program that does not provide an improvement in outcomes or provides improvements at an unacceptably high cost is a poor candidate for wider implementation. However, assessing the potential of additional Basa funding also requires consideration of the new implementation context. With the completion of the rollout of MTBMLE, future Basa expansion would involve schools currently implementing MTBMLE. Assessing Basa as an investment requires consideration of the articulation of the relevant Basa inputs with the ongoing DepEd delivery system of MTBMLE. These articulation decisions would include (among others): Does the Basa teacher training replace current DepEd MTBMLE training in the new areas or is the Basa training provided in addition to DepEd training? Do materials developed to implement Basa replace current MTBMLE materials or are they provided as additional materials? Does the expansion scenario assume DepEd production of the Basa materials or USAID production?

A shortcoming of the possible alternative scenarios for scaling-up any of the Basa components, as opposed to replicating the entire program, is that the marginal C-E design will not provide independent costs and effects of each of the Basa components, rather the costs and effects of the entire Basa program will be estimated, and the marginal C-E ratios will be for the intervention as a whole. The investment case will consider costing options for scaling up, but it is unable to identify effects, and hence CE ratios, for each component.

The final investment case product will describe this proposed articulation and estimate the resource requirements for expansion and expected impact for scenarios identified by USAID and GoPH.

²¹ The Basa program trains teachers to work with students in grades 1 to 3. To calculate costs per student, one option is to define the population as any student who passed through all three grades during the duration of the program. This option would solve the problem of counting each student several times. Social Impact will incorporate stakeholder views regarding how to best define or count the student population for calculating per student costs.

²² Any positive difference in reading outcomes from the reading assessment would permit the calculation of a ratio between Basa costs and improvements in reading scores attributable to Basa. However, in absence of information about the relationship between costs and outcomes of the standard MTBMLE it would be difficult to assess this ratio as a standalone argument for or against additional investment in Basa.

IV. FINDINGS

Overview of the sample

Table 4 displays the intended sample of this impact evaluation by grade, along with the sample actually achieved on a panel basis at the student level. The overall non-response rate of about 4.4% is consistent with the expected 5% rate and well below the 16.67% attrition threshold needed to maintain the study's intended power.

Table 4: Planned and actual sample

	Schools	Students/ school	Total (planned)	Total (actual)	Non- response
Grade 1	240	6	1,440	1,377	4.38%
Grade 2		6	1,440	1,382	4.03%
Grade 3		6	1,440	1,372	4.72%
Total	240²³	18	4,320	4,131	4.38%

Table 5, below, displays basic characteristics of the treatment and comparison groups after sample weights are applied. The groups are comparable across all of these characteristics with the exception of G1-G3 enrollment, where Basa schools appear to be slightly smaller.

Table 5: Characteristics of the Treatment and Comparison Groups

	Standard MTBMLE	Basa
Female	48%	47%
Attended kindergarten	94%	92%
Read to at home	81%	82%
Students missing school in last 4 weeks	48%	45%
Student has books at home	79%	80%
Student has books at home in MT	70%	67%
Parents that desire university-level education for student	94%	96%
Parents who feel comfortable at student's school	100%	100%
Parent involvement in student's school	86%	82%
Average class size	35.6	34.1
Total enrollment in grade 1 - grade 3	310.5	271.9

²³ The actual number of schools increased to 244 because 4 supplemental schools were added for schools that did not have at least 6 students in each grade for grades 1-3.

Progress towards Reading Fluency and Comprehension Benchmarks

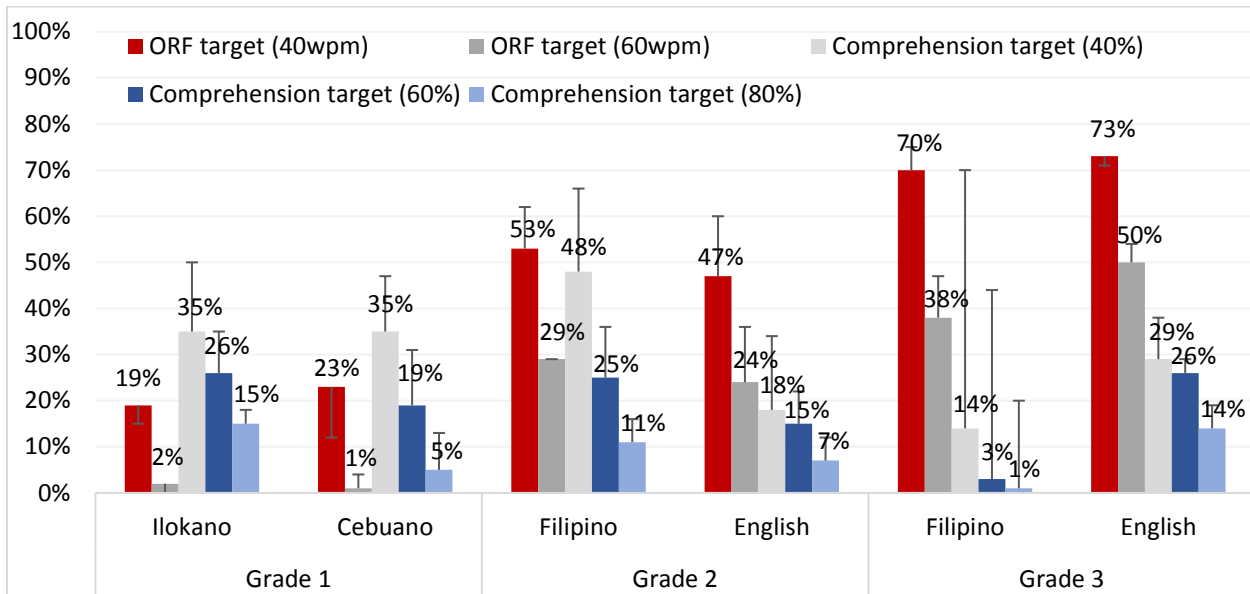
Figure 3 and Figure 4 show progress toward DepEd targets for EGRA benchmarks for Basa and Standard MTBMLE (comparison) schools, respectively, at the end of school year 2015/2016. The colored bars show the percentages of students reaching the DepEd targets, while the line above each bar illustrates the DepEd target. Where the colored bars reach or surpass the line, students are reaching or surpassing the DepEd target. Where there is a large distance between the colored bar and the line, students are far from achieving the DepEd target.

Basa students are meeting or exceeding targets for oral reading fluency benchmarks for Ilokano, while comparison students fall short of these targets. Basa students also outperform comparison students in Ilokano reading comprehension targets; for example, while 35% of Basa students reach the 40% comprehension benchmark, just 17% of comparison students are meeting this benchmark. For Cebuano, 23% of Basa students and 22% of comparison students attained the 40 words per minute benchmark, which exceeds the DepEd target for this benchmark of 12%, but both groups fall short of the targeted 4% for the 60 words per minute benchmark. Basa and comparison students show similar progress toward reading comprehension benchmarks for Cebuano; in both groups 35% of students are reaching the 40% comprehension benchmark, which is 12 percentage points below the DepEd target.

Basa and comparison students show similar progress toward DepEd targets for Filipino and English in Grades 2 and 3. It should be noted that the Grade 3 Filipino oral reading passage and associated reading comprehension questions are more challenging than the Grade 2 versions. Thus, Grade 3 oral reading fluency and comprehension scores are not comparable between these grades. The Grade 3 Filipino assessment was designed for the purposes of the impact evaluation, and therefore should not be considered comparable with the Grade 3 Filipino benchmarks, which were created for a different assessment.²⁴

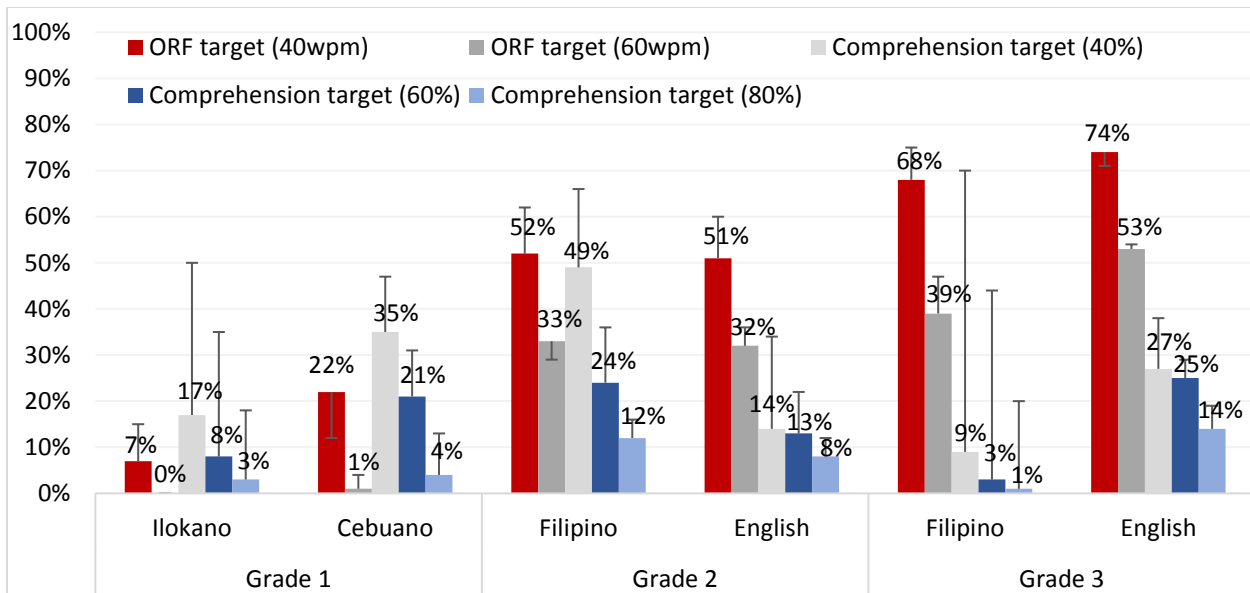
²⁴ During baseline pilot testing, the IE team found that some students were scoring 100% on the Grade 2 Filipino EGRA assessment. Since the purpose of the IE is to measure changes over time between two groups, it is necessary to have a test of sufficient difficulty that students are not receiving very high scores at baseline, so that improvements can be detected. Out of concern for the implications of these “ceiling effects” on the evaluation results, the IE team chose to develop a more challenging Grade 3 assessment with more complex vocabulary and sentence structure.

Figure 3: Progress Against SY 2015/2016 Benchmarks, Basa Schools



Note: The colored bars show the percentages of students reaching the DepEd targets, while the line above each bar illustrates the DepEd target.

Figure 4: Progress Against SY 2015/2016 Benchmarks, Standard MTBMLE Schools



Note: The colored bars show the percentages of students reaching the DepEd targets, while the line above each bar illustrates the DepEd target.

Grade 1

EGRA: mother tongue

Grade 1 EGRA assessments in mother tongue show sizeable gains over the course of the school year for both Basa and Standard MTBMLE students, including sizeable reductions in zero scores, especially for reading comprehension, for which zero scores decreased from 64% to 39% for Basa students and from

65% to 42% for Standard MTBMLE students. (See Annex VIII-EGRA Zero Scores). While the Basa and comparison students performed similarly at baseline, Basa students scored higher across all subtests at midline. These effect sizes are small and statistically insignificant except for letter sounds correctly identified in one minute, where Basa students score, on average, 5.12 letter sounds more per minute ($p=0.089$),²⁵ after controlling for demographic, household and school-level variables. Regression results disaggregated by sex reveal that Basa is differentially impacting boys and girls. While program impact estimates are null for all subtests for boys, impact estimates are statistically significant at the 90% confidence level for girls on letters ($p=0.070$), oral reading fluency ($p=0.064$), and reading comprehension ($p=0.082$). We also observe differential treatment effects across language, with generally negative treatment effects in Ilokano and positive treatment effects in Cebuano.

Table 6: EGRA Results for Mother Tongue

GI EGRA, Mother Tongue	MTBMLE		Basa		Regression	
	BL	ML	BL	ML	Effect	P-val
Letter sounds, items correct per minute ²⁶	17.87	18.31	16.87	21.72	5.120*	(0.089)
Familiar words, items correct per minute ²⁷	12.58	20.62	13.89	23.70	1.505	(0.487)
Unfamiliar words, items correct per minute	9.29	16.53	10.80	18.64	0.195	(0.893)
Oral reading fluency, items correct per minute	13.43	21.18	12.28	23.34	3.662	(0.173)
Reading comprehension, percent correct (w/ zeros)	10%	25%	11%	28%	0.029	(0.388)
Reading comprehension, percent correct (w/o zeros)	15%	32%	15%	33%	0.027	(0.426)

*Denotes a statistically significant effect at a 90% confidence level or better.

EGMA: Grade 1

Early Grade Math Assessments (EGMA) were administered to test for any effect of the Basa Pilipinas Project on aptitude in mathematics. Grade 1 results show no program treatment effect on number identification, quantity discrimination, missing numbers, addition, or subtraction, but holding all else equal, the project had an effect of around 5% (significant at a 90% confidence level) on the word problems subtest for Grade 1 students. See Annex III-EGMA Findings.

Grade 2

EGRA: Grade 2 Filipino

Table 7 shows Filipino EGRA results for Grade 2 students. The data show substantial gains for both Basa and comparison students over the course of the school year, and reductions in zero scores across all subtests (see Annex VIII-EGRA Zero Scores), especially for reading comprehension. Results show small and statistically insignificant treatment effect sizes across all subtests. However, we observe a nearly significant gain in reading comprehension for Basa students relative to comparison students ($p=0.143$). Regressions run separately for boys and girls to test for differential treatment effects show null effects for both boys and girls in Grade 2 Filipino.

²⁵ A p-value less than 0.1 indicates a statistically significant effect at a 90% level of confidence. The smaller the p-value the stronger the evidence in support of the treatment effect.

²⁶ This result becomes insignificant after controlling for whether or not the school participated in ELLN (TE=5.772, $p=0.100$).

²⁷ This result is statistically significant in an alternate regression model, using a lagged dependent variable (TE=3.953, $p=0.028$).

Table 7: G2 EGRA Results for Filipino

	MTBMLE		Basa		Regression	
	BL	ML	BL	ML	Effect	P-val
G2 EGRA, Filipino						
Letter sounds, items correct per minute	16.28	23.10	18.85	25.63	0.709	(0.669)
Familiar words, items correct per minute	31.27	40.70	30.87	39.82	0.190	(0.885)
Unfamiliar words, items correct per minute	19.21	24.41	19.36	23.95	-0.160	(0.879)
Oral reading fluency, items correct per minute	37.35	45.73	34.78	43.13	2.502	(0.398)
Reading comprehension, percent correct (w/ zeros)	26%	31%	24%	31%	0.057	(0.143)
Reading comprehension, percent correct (w/o zeros) ²⁸	31%	35%	25%	33%	0.070	(0.130)

*Denotes a statistically significant effect at a 90% confidence level or better.

EGRA: Grade 2 English

In addition to Filipino, Grade 2 students are also assessed in English. As was the case for Filipino, Basa students display nearly equal gains on English EGRA subtests as Standard MTBMLE students, except for reading comprehension, where Basa students improved by 11 percentage points relative to comparison students ($p=0.052$). Sex disaggregated results show statistically significant results for Basa girls relative to comparison girls in reading comprehension ($p=0.066$), but results are not significant for boys.

Table 8: G2 EGRA Results for English

	MTBMLE		Basa		Regression	
	BL	ML	BL	ML	Effect	P-val
G2 EGRA, English						
Letter sounds, items correct per minute	17.47	23.98	22.19	27.69	-0.418	(0.792)
Familiar words, items correct per minute	27.55	36.53	26.30	34.53	1.304	(0.497)
Unfamiliar words, items correct per minute	15.53	21.15	14.65	20.34	1.317	(0.400)
Oral reading fluency, items correct per minute	36.01	42.46	33.69	39.96	0.943	(0.629)
Reading comprehension, percent correct (w/ zeros)	17%	19%	14%	21%	0.109*	(0.052)
Reading comprehension, percent correct (w/o zeros)	21%	22%	16%	23%	0.098*	(0.058)

*Denotes a statistically significant effect at a 90% confidence level or better.

EGMA: Grade 2

Grade 2 EGMA results show that students in Basa schools, holding all else equal, displayed an increase of 2.13 numbers per minute more than their peers in Standard MTBMLE schools on the number identification subtest, an effect that was also significant at a 90% confidence level. We do not observe a significant treatment effect on any other EGMA subtest. See Annex III-EGMA Findings for EGMA results.

Grade 3

EGRA: Grade 3 Filipino

As was the cases for Grades 1 and 2, students scored substantially higher on the Grade 3 Filipino EGRA relative to baseline. It should be noted that the Grade 3 Filipino oral reading passage and associated reading comprehension questions are more challenging than the Grade 2 versions. Thus, oral reading fluency and

²⁸ Result is statistically significant in an alternate lagged dependent variable regression model (TE=0.053, $p=0.085$).

comprehension scores are not comparable between these grades. Moreover, the assessment was designed for the purposes of the impact evaluation, and therefore should not be considered a leveled test for Grade 3 students. Grade 3 Filipino EGRA results show small and statistically insignificant treatment effects between Basa and comparison students over time, with the exception of one subtest—letter sounds correct per minute—in which comparison students experience greater gains than Basa students ($p=0.111$); this finding could be related to the large differences in this subtest observed between Basa and comparison at baseline, where Basa students scored 24.05 letters per minute and comparison students scored 19.42 letters per minute.

Table 9: G3 EGRA Results for Filipino

G3 EGRA, Filipino	MTBMLE		Basa		Regression	
	BL	ML	BL	ML	Effect	P-val
Letter sounds, items correct per minute	19.42	25.59	24.05	28.72	-2.311	(0.111)
Familiar words, items correct per minute	47.34	51.14	48.71	53.02	0.313	(0.788)
Unfamiliar words, items correct per minute	28.10	29.99	28.74	30.87	-0.005	(0.995)
Oral reading fluency, items correct per minute	47.85	51.10	48.93	52.12	-0.389	(0.739)
Reading comprehension, percent correct (w/ zeros)	13%	15%	15%	18%	0.020	(0.300)
Reading comprehension, percent correct (w/o zeros)	14%	16%	16%	19%	0.016	(0.428)

*Denotes a statistically significant effect at a 90% confidence level or better.

EGRA: Grade 3 English

Grade 3 English EGRA results show slightly positive and insignificant treatment effects on letter sounds, unfamiliar words, and reading comprehension, and slightly negative and insignificant treatment effects on familiar words and oral reading fluency.

Table 10: G3 EGRA Results for English

G3 EGRA, English	MTBMLE		Basa		Regression	
	BL	ML	BL	ML	Effect	P-val
Letter sounds, items correct per minute	22.41	28.97	24.51	31.93	0.544	(0.694)
Familiar words, items correct per minute	45.34	53.82	45.31	53.51	-0.649	(0.601)
Unfamiliar words, items correct per minute	25.85	30.26	24.97	31.01	1.663	(0.166)
Oral reading fluency, items correct per minute	55.04	61.06	54.80	60.64	-0.157	(0.905)
Reading comprehension, percent correct (w/ zeros)	22%	30%	24%	31%	0.016	(0.731)
Reading comprehension, percent correct (w/o zeros)	14%	31%	16%	33%	0.024	(0.623)

*Denotes a statistically significant effect at a 90% confidence level or better.

EGMA: Grade 3

Grade 3 EGMA results show null treatment effects for Basa on math scores. See Annex III-EGMA Findings.

Predictors of reading outcomes

Multivariate Tobit regression analysis was conducted to measure which student, household and school independent variables were predictors of reading outcomes. Regressions were run using oral reading fluency and reading comprehension scores, respectively, as dependent variables. The full results of these regressions can be found in Annex IX- Complete Regression Tables. Each regression includes the variables found in Table 11.

Table 11: Independent Variables Used in Regressions

Student	Household	School
<ul style="list-style-type: none"> – Age – Sex – Grade – Region – Attended Kindergarten – Age at Kindergarten – Age when someone began reading to him/her – Homework – EGMA number identification score 	<ul style="list-style-type: none"> – Household assets index (wealth proxy) – Reading materials at home – Receives homework help at home – Highest household education 	<ul style="list-style-type: none"> – School resources index – Highest grade instructed at the school – School closure – School enrollment – Teacher months of teaching experience – Teacher uses lesson plan – Students are put into small reading groups – Teacher has post-graduate degree – Class size – General teaching practices index – Reading-specific practices index – Language use in class: MT, Filipino, and English

For those variables, we find that when looking at ORF, holding all else equal:

- Sex, region, and EGMA scores are highly significantly related to ORF scores ($p < 0.01$). Specifically:
 - Female students score between 6.6 and 13.3 words per minute higher than male students.
 - Students from Region 7 score higher than students from Region 1 by between 8.0 and 22.6 words per minute.
 - EGMA scores, and number identification in particular, are positively related to ORF with a one number per minute increases in those tests being associated with one word per minute increase in ORF across each language.
- Students who attended Kindergarten scored 7.4 words per minute higher in mother tongue (Grade 1) than students who did not attend Kindergarten, but it is not predictive of Filipino or English scores (Grade 2 and 3).
- Students who do homework score higher than students who do not, though this relationship is only significant for Filipino. Moreover, receiving homework help is inversely related to ORF score, though only statistically significant for English, which could mean students with lower aptitude require more homework help, or that students who receive homework help actually learn less of the material.
- Having someone at home reading to the child at home starting at a younger age is positively related to ORF scores and highly statistically significant across all languages and grades; reading to the child one year earlier is associated with 1.3 to 2.7 words per minute increase in ORF.
- Household assets highly significantly positively predict ($p < 0.01$) ORF scores, but this result is only statistically significant for English.
- Schools with higher enrollment and higher grade levels instructed have higher test scores.
- More experienced teachers are predictive of higher ORF scores, particularly for mother tongue and Filipino.
- Class size is statistically significantly and negatively related with ORF for Filipino and English (Grades 2 and 3); students in larger classes score lower than those in smaller classes.

- Students whose teachers demonstrate reading-specific teaching best practices²⁹ correctly read, on average, 3.6 more words per minute ($p=0.04$).

Schools

School-level Outcomes

School-level data were collected from principals at baseline and midline. The regression coefficients and p-values in the table indicate the effect of being a Basa school relative to being a Standard MTBMLE school. The models were run on the midline data alone as a cross-section, as many potential control variables collected at baseline could have already been influenced by the Basa program. Where the outcomes of interest are continuous variables, such as percentage of teacher absent, these coefficients are from a standard OLS regression and shown in the first two regression columns. They indicate the effect in terms of the units of the outcome variable. Where the outcomes of interest are binary, such as whether or not a principal checks a teacher lesson plan, these coefficients are from a logit model and represent the odds ratio (OR) of the outcome of interest being true for a principal at a Basa school compared to a principal at a comparison school.

Table 12 shows that principals at Basa schools are much more likely ($OR=28.23$, $p=0.003$) to report that their teachers participate in LAC at midline than standard MTBMLE schools, though they convene less frequently than Standard MTBMLE schools ($OR=0.234$, $p=0.002$). Standard MTBMLE schools were much more likely to report convening LAC once a week, while a substantial portion of Basa schools reported convening the LAC 1-2 times per month.

Basa schools were much more likely to have a sufficient number of textbooks for Grade 1, Grade 2, and Grade 3, and this difference is statistically significant at a 95% confidence level or greater for each grade. However, principals in Basa schools are statistically significantly less likely to observe a classroom at least 2-3 times per week or more ($OR=0.452$, $p=0.046$), and Basa schools reported a statistically significantly lower fraction of Grade 2 teachers trained in MTBMLE ($p=0.051$). It should be noted that we observe sizeable decreases in principals checking teacher lesson plans, observing classrooms at least 2-3 times per week, and students taking library books home from school from baseline to midline for both Basa and Standard MTBMLE schools.

Table 12: School Outcomes in Basa and Standard MTBMLE Schools

	MTBMLE		Basa		Regression			
	BL	ML	BL	ML	Effect	P-val	OR	P-val
Principal checks teacher lesson plans	50%	59%	75%	58%			0.955	(0.914)
Principal observes classrooms 2-3 times+ per week	51%	40%	52%	34%			0.452*	(0.046)
Students can take library books home	23%	18%	27%	17%			1.406	(0.518)
Teachers at the school participate in LAC	86%	85%	93%	94%			28.230*	(0.003)
Principal participates in LAC	66%	76%	85%	84%			2.018	(0.339)
School has copy of K-12 curriculum in MT	92%	98%	96%	99%			0.425	(0.756)
% grade 1 teachers trained in MTBMLE	85%	90%	88%	90%	-0.032	(0.569)		
% grade 2 teachers trained in MTBMLE	93%	95%	96%	85%	-0.111	(0.051)		
% grade 3 teachers trained in MTBMLE	94%	95%	95%	92%	-0.078	(0.151)		

²⁹ See Table 15 for items included in this index.

School had enough grade 1 textbooks at start of SY	47%	50%	83%	87%			6.006*	(0.002)
School had enough grade 2 textbooks at start of SY	61%	69%	83%	90%			7.502*	(0.000)
School had enough grade 3 textbooks at start of SY	54%	60%	73%	82%			3.701*	(0.002)
Teachers convene for LACs at least once every week	39%	39%	9%	15%			0.234*	(0.002)

*Denotes a statistically significant effect at a 90% confidence level or better.

Teacher-level Outcomes

Table 13, below, shows mean values for various teacher-level intended outcomes of the Basa project at baseline and midline. As was done for the school data, the regression models were run on the midline teacher data alone as a cross-section, for the same justification outlined in the previous section on school-level outcomes. Many teacher-level outcomes show a null effect of the Basa project at midline, with a few important exceptions. One notable exception is that, holding all else constant, teachers at Basa schools were more likely to have attended early grade reading training than equivalent peers at comparison schools, although the coefficient is just short of significance at a 90% confidence level. However, there appears to be no difference in the number of days attended. Also, teachers at Basa schools were significantly more comfortable with the alphabet and grammatical rules of the local mother tongue and, in the same fashion, significantly less likely to be “not at all comfortable” with instruction in mother tongue. A seemingly negative effect of the Basa project is that teachers at Standard MTBMLE schools spend over a half hour more of class time in mother tongue compared to their peers at Basa schools. However, when this effect is disaggregated by grade, the effect is reduced and rendered insignificant. Teachers in grade 2 are the main drivers of the difference, where a shift away from mother tongue instruction should be expected at the end of the school year, per National MTBMLE policy. Another negative result, which is discussed in greater detail in the teacher observation outcomes section, is that teachers at Basa schools displayed fewer general best-practice teaching behaviors than those at Standard MTBMLE schools.

Table 13: Teacher-level Outcomes

	MTBMLE		Basa		Regression			
	BL	ML	BL	ML	Effect	P-val	OR	P-val
Early grade reading training, % of teachers attended	68%	65%	71%	73%			1.388	(0.134)
Early grade reading training, days attended	4.35	3.63	4.02	3.81	0.154	(0.558)		
Class time in mother tongue, minutes	224.88	286.85	233.21	249.50	-32.970*	(0.000)		
Class time in Filipino, minutes	46.76	51.35	49.26	47.10	-3.264	(0.344)		
Class time in English, minutes	43.77	50.80	53.03	48.84	-1.104	(0.777)		
Teachers displaying 75%+ of applicable general behaviors	86%	71%	84%	63%			0.568*	(0.005)
Teachers displaying 75%+ of applicable reading behaviors	55%	28%	49%	26%			0.923	(0.733)
General Teaching Behavior Index	90%	84%	89%	80%	-0.049*	(0.000)		
Reading Teaching Practices Index	73%	53%	70%	56%	0.024	(0.365)		
Teachers at least somewhat familiar with MT grammar	82%	87%	98%	95%			2.862*	(0.003)
Teachers not comfortable providing instruction in MT	8%	8%	0%	2%			0.247*	(0.006)

*Denotes a statistically significant effect at a 90% confidence level or better.

Although it was far more likely for Basa schools to possess enough learners’ manuals at the beginning of the school year according to their principals, teachers in Basa and comparison schools report approximately equal prevalence of learners’ manuals in mother tongue. About 60% of schools in each category possessed enough learning manuals for each student to have one at midline. A possible

explanation for the discrepancy is the increased prevalence of other reading materials in mother tongue at Basa schools (see Figure 5), a finding that is significant even when controlling for other factors in an ordered logistic regression model (OR=2.543; $p<0.001$).

Figure 5: Access to Non-Learners' Manual Reading Materials in Mother Tongue

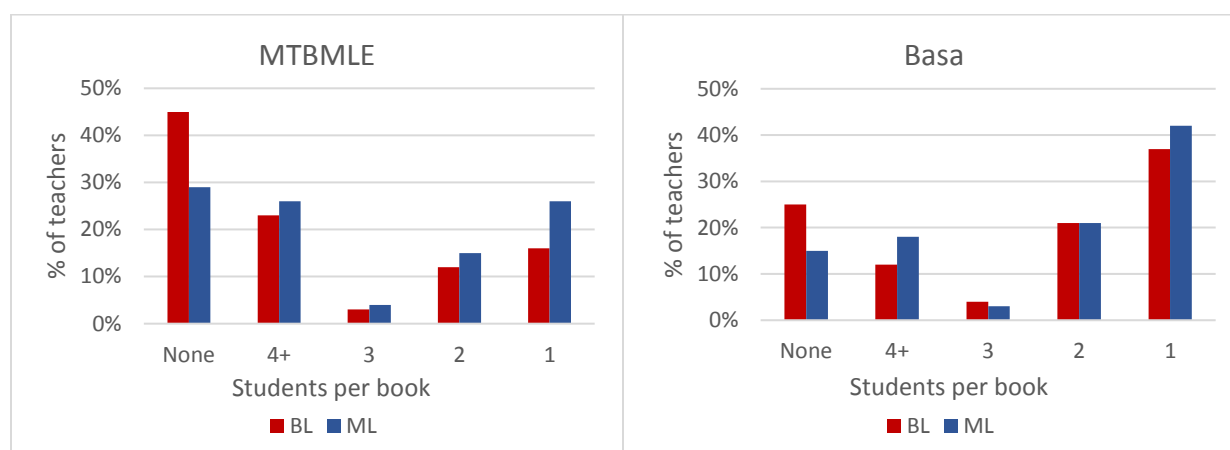


Table 14 and Table 15, below, display the percent of teachers in Basa and comparison schools at baseline and at midline that demonstrated general and reading-specific “best-practice” behaviors, respectively. In order to be counted as demonstrating each behavior, the teacher must have been scored by an enumerator as displaying the behavior at least “sometimes” or “partially correct” in two or more out of the three times that they were observed. In order to determine the effect of teaching at a Basa school on the demonstration of these behaviors, each one was run as the dependent variable of a logistic regression. The coefficients in the table compare the odds of the behavior being displayed by a teacher at a Basa school compared to a comparison school, holding all else constant.

Table 14: General Best-Practice Teaching Behaviors

Category	General "best practice" teaching behavior	MTBMLE		Basa		Regression	
		BL	ML	BL	ML	OR	P-val
Classroom Materials	Uses different instructional resources	94%	95%	97%	97%	0.987	(0.982)
	Uses materials besides textbooks	84%	83%	88%	85%	0.868	(0.544)
Opportunities for Reflection and Application	Connects to previous lessons	57%	86%	42%	79%	0.672*	(0.094)
	Asks probing questions	94%	78%	92%	67%	0.437*	(0.000)
	Provides opportunities to apply learning	94%	88%	88%	76%	0.348*	(0.000)
	Provides opportunities for critical thinking	89%	73%	88%	55%	0.357*	(0.000)
Positive Learning Environment	Effective classroom management	96%	100%	100%	100%		
	Treats students fairly	100%	100%	100%	100%		
Other	Manages time effectively	99%	100%	100%	100%		
	Assesses pupil learning	100%	57%	100%	57%	0.933	(0.734)
	Cooperative learning strategies	85%	70%	85%	69%	0.804	(0.267)

*Denotes a statistically significant effect at a 90% confidence level or better.

The effect of the Basa project on teaching behaviors of interest differs dramatically between general teaching behaviors and reading-specific teaching behaviors. Across all of the general teaching behaviors in

Table 14, holding all else constant, the odds of a teacher at a Basa school displaying the behavior are either similar to or significantly lower than the odds of a teacher at a Standard MTBMLE school displaying the same behavior. The behaviors that comparison schools are significantly more likely to display are all in the “Opportunities for Reflection and Application” category. A teacher at a Standard MTBMLE school is two to three times more likely to display these behaviors than an equivalent teacher at a Basa school.

On the other hand, with one significant exception, teachers at Basa schools are either similarly likely or significantly more likely to exhibit reading-specific behaviors of interest. A Basa teacher is 1.9 to 2.7 times more likely than an equivalent teacher at a comparison school to ask questions to assess listening comprehension, provide instructions for decoding words, or ask a learner to recite the alphabet. The only significantly negative effect is on using multiple methods to support comprehension.

Across all teachers, the demonstration of best practice teaching behaviors of any kind decreased from baseline to midline. It is unclear what factors are responsible for this finding. In some cases, field teams reported observing teachers during review classes for exams instead of normal lessons; but this factor alone is unlikely to explain such a significant decline. There is no evidence to support measurement error in the form of more stringent rating at midline, either. This issue will be investigated further at endline.

Table 15: Reading-Specific Best-Practice Teaching Behaviors

Category	Reading-Specific teaching behavior	MTBMLE		Basa		Regression	
		BL	ML	BL	ML	OR	P-val
Opportunities for Developing Comprehension	Asks pre-reading questions	70%	49%	62%	54%	1.293	(0.214)
	Asks learners to act something out	59%	23%	49%	30%	1.454	(0.163)
	Uses multiple methods for comp.	83%	65%	90%	52%	0.488*	(0.000)
	Asks questions to assess reading comp.	94%	90%	95%	93%	1.556	(0.240)
	Asks questions to assess listening comp.	88%	66%	89%	80%	2.653*	(0.000)
	Allows learners to retell story	49%	32%	48%	30%	1.080	(0.739)
Opportunities for Learning to Decode and Spell Words	Encourages sounding it out	64%	44%	52%	47%	1.117	(0.564)
	Provides instructions to decode	54%	26%	47%	39%	1.934*	(0.022)
	Asks learners to recognize letters	52%	24%	54%	31%	1.350	(0.315)
	Asks learners to recite alphabet	29%	11%	30%	20%	2.166*	(0.056)
Positive Learning Environment	Avoids criticizing learners	95%	99%	100%	100%	1.261	(0.928)
	Encourages learners to help each other	81%	60%	75%	60%	0.842	(0.381)
Other	Uses reading-level appropriate activities	79%	66%	86%	66%	1.004	(0.985)
	Asks readers to read aloud	79%	52%	69%	59%	1.291	(0.222)
	Teaches learners new words	79%	64%	64%	69%	1.187	(0.400)
	Assigns individual reading	64%	31%	58%	40%	1.386	(0.213)
	Provides methods for good writing skills	83%	36%	78%	29%	0.740	(0.202)

*Denotes a statistically significant effect at a 90% confidence level or better.

V. CONCLUSIONS

Progress towards Evaluation Question 1

Both Basa and Standard MTBMLE students attained considerable gains in all subtests across all languages and grades from baseline (beginning of the school year) to midline (end of the school year), including substantial progress toward DepEd targets. Basa students experienced gains above and beyond Standard MTBMLE students in mother tongue (Grade 1) on all subtests, though these effects are generally small and statistically insignificant,³⁰ with the exception of letter sounds per minute, which is significant at a 90% confidence level. We find differential results for Grade 1 girls and boys with girls in Basa schools showing statistically significant gains relative to comparison girls in letters, oral reading fluency, and reading comprehension, while grade 1 boys in Basa schools are performing statistically similarly to comparison boys. Results for Filipino and English (Grades 2 & 3) are more mixed, with Basa students experiencing gains relative to Standard MTBMLE students on some subtests (though statistically insignificant) and Standard MTBMLE students experiencing greater gains on others (though also statistically insignificant). Grade 2 Basa students, however, experienced significantly greater gains than Standard MTBMLE students in English reading comprehension.

Girls continue to perform significantly better than boys in oral reading fluency across grades 1-3. Other important predictors of oral reading fluency are: region, math score, Kindergarten attendance, doing homework, reading at home from a younger age, and household assets (a measure of household wealth). In addition to these student and household predictors, several school and teacher characteristics were significant predictors of oral reading fluency, namely, attending a school with higher enrollment and higher grades of instruction, smaller class sizes, and having a teacher with more teaching experience.

Basa Principals were much more likely to report having sufficient textbooks in mother tongue, Filipino, and English, and much more likely to be reported to participate in LACs. However, Basa schools reported lower percentages of Grade 2 teachers trained in MTBMLE at midline than baseline, and lower than Standard MTBMLE schools. Moreover, Basa principals reported observing classrooms and checking teacher lesson plans less frequently at midline than baseline, and at midline, Basa principals report observing classrooms statistically significantly less than Standard MTBMLE principals.

In contrast to reports by Basa principals, Basa teachers report having similar numbers of learner's manuals as teachers at Standard MTBMLE schools, but significantly more other reading materials. Basa teachers also report being significantly more familiar with the mother tongue alphabet and grammar rules and more comfortable teaching in mother tongue. However, Basa and Standard MTBMLE teachers report similar levels of training on early grade reading instruction, including in mother tongue, which perhaps lends support to the greater efficacy of the Basa teacher training relative to Standard MTBMLE.

Teacher observation data show a general trend of lower scores on most items across Basa and Standard MTBMLE teachers from the beginning to the end of the school year. Moreover, Basa teachers score statistically significantly lower on the general teaching behavior index and sub-items but generally higher on reading specific teaching behaviors.

³⁰ It should be noted that the time between baseline and midline was relatively short—approximately 5 months—as described in the limitations section.

Progress towards Evaluation Question 2

To date, SI has developed a detailed C-E analysis framework based on a detailed review of project documents, which is summarized in Section 3 of this report and included in full in Annex IV-Cost Analysis Framework. Key features include:

- The team will assess Basa as a *supplementary* strategy implemented alongside DepEd standard, or marginal cost-effectiveness of Basa;
- Marginal C-E ratio will be the average per-student costs that need to be added to the standard MTBMLE program, to produce a one unit increment in reading test scores; and
- Ingredients for the standard MTBLE program will not be formally costed, but they will be used to support necessary assumptions (*ex. what is additional or a substitution*).

The framework will be the foundation of the C-E analysis.

In addition to the framework, SI is also currently working with stakeholders to elaborate detailed Basa program ingredients. Once finalized, the SI team will work with the Basa team to cost each of the ingredients, after which SI will be used to calculate the average unit cost per student, and ultimately arrive at a unit cost per increment in reading test scores to complete the C-E analysis. Thereafter, SI will also develop an investment case for expanding Basa, based on the C-E analysis in a forward-looking context. The results of the C-E analysis and accompanying investment case will be provided in the final evaluation report.

ANNEX I-EVALUATION STATEMENT OF WORK

A. IMPACT EVALUATION PARAMETERS

A rigorous evaluation design must be used to the greatest extent possible in assessing the impact of Basa

Pilipinas and of mother-tongue reading instruction and for related cost analyses.

1. Methodological Options

The methodological options for conducting a rigorous impact evaluation include:

- a. Experimental designs in which the contractor establishes treatment and control groups for comparison from the beginning of program implementation with random assignment of eligible participants into treatment and control groups; and
- b. Quasi-experimental designs in which the contractor constructs comparison groups that resemble treatment groups, at least in observed characteristics, through some kind of matching method, such as propensity scoring or multivariate correlation. Difference-in-difference methodology can then be used to compare between treatment and comparison groups before and after program implementation. Other analytical options, such as instrumental variable and regression discontinuity designs, may be considered if appropriate and in consultation with USAID.

2. Qualitative Data

Qualitative data analysis must also be used to compliment quantitative data and enhance the depth of the evaluation study. This may include data from administrative records and secondary sources on the implementation of MTBMLE and Basa Pilipinas, observation of MTBMLE and Basa Pilipinas activities (teaching, training, etc.), as well as selected individual and/or group interviews (with administrators, teachers, trainers, material developers, students, and other stakeholders).

3. Cost Analysis

Several different aspects of cost analysis must be included such as cost-effectiveness, cost-benefit, cost utility and cost feasibility analyses. While it is expected that the bulk of the cost analysis under this contract will look at cost-effectiveness, cost-benefit, cost utility and cost feasibility analysis are also relevant. The overall goal of cost analysis in this evaluation is to provide timely data to USAID, the GPH, and other relevant stakeholders to support decision-making about rollout and scaling up of the reading interventions evaluated.

4. Measuring Outcomes

As noted previously, the Basa Pilipinas activity supports MTBMLE in six (6) provinces encompassing instruction in three (3) mother tongues (Ilocano, Cebuano and Maguindanaoan). It is anticipated that the Basa Pilipinas Impact Evaluation will collect data on reading performance from a statistically significant sample (at least a 95% confidence level) or higher of students receiving USAID assistance and those not receiving USAID assistance. Although the size of that sample will vary depending on the number of causal variables being examined in the proposed evaluation design, this has been estimated as approximately 1,000 students receiving USAID assistance and 1,000 not receiving USAID assistance each year.

Reading performance (in English and Filipino) must be used as the main outcome indicator in assessing Basa Pilipinas. Many established reading achievement tests exist to measure this indicator including the Early Grade Reading Assessment (EGRA) developed through funding support from USAID and the World Bank, government-sponsored reading achievement tests such as the Philippine Informal Reading Inventory (Phil-IRI), the National Achievement Test (NAT), and others. The Contractor must be able to use or modify existing reading performance instruments and/or existing reading performance data (from DepEd, administrative records, etc.). In all cases, the Contractor must select or create the best tool to measure reading achievement in this context in close consultation with USAID and DepEd. This may involve a combination of tools, such as EGRA to measure performance for control and comparisons groups and GPH surveys to provide baseline and national comparisons. The Contractor must also determine (in consultation with USAID and DepEd) how data on reading achievement can best be disaggregated (e.g., with regard to gender, location, indigenous affiliation, initial reading ability etc.). Gender disaggregation is of particular priority to help USAID and DepEd better understand gender differences in reading achievement and how performance gaps that exist between girls and boys in different sub-regions can best be addressed .

5. Coordination

Significant coordination is required to carry out this evaluation. The Contractor will work closely with the Basa Pilipinas implementer (Education Development Center), the implementer of USAID's PhilEd Data activity (RTI) that collects related educational statistics, USAID, and other important education program partners. The Contractor will also work closely with DepEd officials who are implementing the country-wide MTBMLE program and whose approval will be needed to collect data in the field. In addition, the Contractor will work closely with relevant USAID technical staff and technical staff of other bilateral and multilateral donors implementing related education programs in the Philippines.

a. Coordination with USAID's Basa Pilipinas Contractor

The Contractor is responsible for designing and implementing the Basa Pilipinas impact evaluation -- providing oversight, maintaining quality, and assuring independence. Under the Basa Pilipinas contract, the implementer (EDC) collected baseline data on outputs and outcomes for program participants (those receiving USAID assistance) that can be

aggregated at the classroom, school and division levels. To the extent possible, the Contractor must utilize this baseline and follow-up data collected by the Basa contractor, while also identifying or constructing comparison or control groups and collecting outcome data from these groups as necessary, appropriate and feasible to provide the basis for analyzing Basa Pilipinas' impacts and costs.

The Contractor will work closely with the Basa Pilipinas implementer (EDC) and USAID in finalizing the evaluation design, coordinating program implementation, and articulating their joint and separate responsibilities for data collection, analysis and reporting. To the greatest extent possible, the Contractor will utilize the same instruments and procedures for collecting output and outcome data as the Basa contractor and/or work closely with the Basa contractor to modify those instruments and data collection procedures as necessary and appropriate. The evaluation contractor will also work closely with the Basa contractor and USAID to modify program implementation (e.g., program roll out, phasing, site and participant selection, etc.) as possible and appropriate to ensure the most credible and powerful evaluation design and analysis.

b. Coordination with the USAID's PhilEd Data Contractor

The evaluation Contractor will also work closely with the implementer (RTI) of USAID's PhilEd Data activity to make the best possible use of the country-wide reading performance data being collected. To the greatest extent possible, the Contractor will use this data as a basis for controlled comparisons or, where appropriate, collect similar data itself

ANNEX II-SAMPLED SCHOOLS

Sampled Schools, Standard MTBMLE

	School (Standard MTBMLE)	Division	Municipality
1	anapao es	pangasinan i lingayen	burgos
2	aurelio ibero mes (jugno es)	negros oriental	amlan (ayuquitan)
3	ayusan-paoa elementary school	vigan city	city of vigan (capital)
4	b. durano es	danao city	danao city
5	b. enriquez es	danao city	danao city
6	baay es	ilocos norte	city of batac
7	badiang ps	negros oriental	valencia (luzurriaga)
8	bais city west es	bais city	bais city
9	balaas ps	negros oriental	jimalalud
10	baligat es	ilocos norte	city of batac
11	balili ps	negros oriental	valencia (luzurriaga)
12	bal-loy es	pangasinan ii binalonan	santa maria
13	balugo es	negros oriental	valencia (luzurriaga)
14	banawe e/s	negros oriental	pamplona
15	bangcal es	negros oriental	jimalalud
16	baoa east es	ilocos norte	city of batac
17	baoa es	ilocos norte	city of batac
18	basac elementary school	siquijor	larena
19	binigan es	ilocos norte	city of batac
20	bio-os es	negros oriental	amlan (ayuquitan)
21	bogo elementary school	siquijor	maria
22	bolos elementary school	siquijor	siquijor (capital)
23	bongalanan es	negros oriental	basay
24	buttong es	laoag city	laoag city (capital)
25	buyong es	lapu-lapu city	lapu-lapu city (opon)
26	caaoacan es	laoag city	laoag city (capital)
27	cabang es	negros oriental	jimalalud
28	calabnugan es	negros oriental	sibulan
29	calango es	negros oriental	zamboanguita
30	calapugan es	pangasinan ii binalonan	natividad
31	camangaan es	vigan city	city of vigan (capital)
32	cambajao es	negros oriental	sibulan
33	can-asagan es	negros oriental	san juan
34	candanay elementary school	siquijor	siquijor (capital)
35	candaping elementary school	siquijor	maria
36	candigum elementary school	siquijor	larena
37	cangabo es	negros oriental	la libertad
38	cangclaran elementary school	siquijor	lazi

	School (Standard MTBMLE)	Division	Municipality
39	cangmunag elementary school	siquijor	san juan
40	canjulao es	lapu-lapu city	lapu-lapu city (opon)
41	cantaroc elementary school	siquijor	maria
42	cantugbas ps	siquijor	maria
43	capalasanan elementary school	siquijor	lazi
44	dapdap elementary school	siquijor	lazi
45	dariwdiw es	ilocos norte	city of batac
46	datagon es	negros oriental	pamplona
47	delfin dawes	danao city	danao city
48	don pablo carmen blanco utzurum mes	negros oriental	basay
49	fatima es	negros oriental	pamplona
50	felix m. tio memorial e/s (bangcolotan es)	negros oriental	zamboanguita
51	gregorio elmaga mes (nasig-id es)	negros oriental	zamboanguita
52	guadalupe es	bogo city	city of bogo
53	hawanay es	talisay city	city of talisay
54	inmalog es	pangasinan ii binalonan	sison
55	jilabangan es	negros oriental	tayasan
56	jose r. remollo es (cambalocot es)	negros oriental	san jose
57	lacaon es	negros oriental	jimalalud
58	langtad es	city of naga cebu	city of naga
59	lebueg es	pangasinan ii binalonan	laoac
60	libo elementary school	siquijor	enrique villanueva
61	lico-an elementary school	siquijor	maria
62	logucan elementary school	siquijor	maria
63	lo-oc es	negros oriental	sibulan
64	maayong tubig es	negros oriental	dauin
65	mabini es	pangasinan ii binalonan	balungao
66	magallanes es	pangasinan ii binalonan	tayug
67	mag-aso es	negros oriental	dauin
68	maglinao es	negros oriental	basay
69	magnuang es	ilocos norte	city of batac
70	magsaysay mes	negros oriental	sibulan
71	malabo ps	negros oriental	valencia (luzurriaga)
72	malaunay es	negros oriental	valencia (luzurriaga)
73	malongcay es	negros oriental	zamboanguita
74	mapalasan es	negros oriental	la libertad
75	maria central elementary school	siquijor	maria
76	martin benjamin mes (tambojangin es)	negros oriental	amlan (ayuquitan)
77	minabuntod ps	negros oriental	canlaon city
78	minalulan elementary school	siquijor	maria

	School (Standard MTBMLE)	Division	Municipality
79	nabago es	negros oriental	zamboanguita
80	naga central es	city of naga cebu	city of naga
81	naguirangan-capacuan es	ilocos norte	city of batat
82	napo elementary school	carcar city	city of carcar
83	nasuji ps	negros oriental	valencia (luzurriaga)
84	new bataan elementary school	siquijor	larena
85	new corregidor elementary school	siquijor	larena
86	palinpinon es	negros oriental	valencia (luzurriaga)
87	pangi elementary school	siquijor	siquijor (capital)
88	papallasen es	pangasinan i lingayen	burgos
89	pisong a elementary school	siquijor	maria
90	ponong elementary school	siquijor	larena
91	ponong elementary school	siquijor	siquijor (capital)
92	po-o elementary school	siquijor	lazi
93	portland es	danao city	danao city
94	puhagan es	negros oriental	valencia (luzurriaga)
95	pulangbato es	negros oriental	valencia (luzurriaga)
96	raois es	vigan city	city of vigan (capital)
97	roxas elementary school	siquijor	enrique villanueva
98	sa-ay elementary school	carcar city	city of carcar
99	sabang es	danao city	danao city
100	sacsac es	negros oriental	bacong
101	saleng es	pangasinan ii binalonan	tayug
102	salngan es	negros oriental	zamboanguita
103	salvacion es	pangasinan ii binalonan	santo tomas
104	san andres es	pangasinan iibinalonan	balungao
105	san antonio elementary school	siquijor	siquijor (capital)
106	san antonio west es	pangasinan ii binalonan	san nicolas
107	san isidro es	pangasinan ii binalonan	san nicolas
108	san joaquin es	pangasinan ii binalonan	balungao
109	san leon es	pangasinan ii binalonan	balungao
110	san miguel es	pangasinan i lingayen	burgos
111	san miguel es	negros oriental	bacong
112	san roque es	pangasinan ii binalonan	san manuel
113	sobol es	pangasinan ii binalonan	san nicolas
114	solangon es	siquijor	san juan
115	sra. ascion es	negros oriental	san jose
116	sta. cruz integrated school	pangasinan ii binalonan	santa maria
117	suba basbas es	lapu-lapu city	lapu-lapu city (opon)
118	tag-ibo elementary school	siquijor	san juan

	School (Standard MTBMLE)	Division	Municipality
I 19	tagmanocan elementary school	siquijor	lazi
I 20	tambisan elementary school	siquijor	san juan
I 21	vicente i. villa ms	negros oriental	valencia (luzurriaga)
I 22	villa jose es	pangasinan ii binalonan	san nicolas

Sampled Schools, Basa Participants

	School (Basa)	Division	Municipality
1	ablayan es	cebu	dalaguete
2	abucay es	bohol	sikatuna
3	alburquerque central es	bohol	alburquerque
4	alcoy central es	cebu	alcoy
5	alicia ces annex	bohol	alicia
6	altavista es	cebu	poro
7	argao i central es	cebu	argao
8	arpili es	cebu	balamban
9	bacay es	cebu	minglanilla
10	bacong es	bohol	anda
11	bangar ces	la union	bangar
12	basdio es	bohol	guindulman
13	batuan central es - annex	bohol	batuan
14	bauang north cs	la union	bauang
15	bayog es	bohol	pres. carlos p. garcia (pitogo)
16	bongoyan es	cebu	borbon
17	borbon central es	cebu	borbon
18	botigues es	cebu	bantayan
19	buenasuerte es	bohol	pilar
20	bugtong kawayan es	cebu	barili
21	burgos central school	ilocos sur	burgos
22	butubut norte es	la union	balaoan
23	buyog es	bohol	jetafe
24	cabancalan ii es	mandaue city	mandaue city
25	cabawan elementary school	tagbilaran city	tagbilaran city (capital)
26	caleriohan es	cebu	dalaguete
27	calioet es	ilocos norte	bacarra
28	canhaway es	bohol	guindulman
29	canlambong es	bohol	dimiao
30	can-olin es	bohol	candijay
31	cansaga elementary	cebu	consolacion
32	capariaan es	ilocos sur	santa cruz
33	carmen central es	cebu	carmen
34	catmon integrated school	cebu	catmon

	School (Basa)	Division	Municipality
35	city east elementary school	tagbilaran city	tagbilaran city (capital)
36	concepcion es	bohol	danao
37	cordova central es	cebu	cordoba
38	cubacub es	mandaue city	mandaue city
39	dait norte es	bohol	buenavista
40	dalid es	mandaue city	tabuelan
41	dalumpinas es	san fernando city	city of san fernando (capital)
42	day-as es	cebu	cordoba
43	don mariano marcos mem. sch.	ilocos norte	pinili
44	don tomas r. mendoza es	la union	naguilian
45	dumalan es	cebu	dalaguete
46	garcia park es	bohol	talibon
47	getafe central es	bohol	jetafe
48	gibitngil is	cebu	medellin
49	hanopol es	bohol	balilihan
50	ilocanos es	san fernando city	city of san fernando (capital)
51	jose chona jo es (cambuhawe)	cebu	balamban
52	kagsing es	cebu	ginatilan
53	kal-anan es	cebu	tabogon
54	kalangahan es	cebu	tuburan
55	kanlungcab ps	cebu	tabuelan
56	kinan-oan es	bohol	trinidad
57	labogon es	mandaue city	mandaue city
58	langtad es	cebu	argao
59	lantag es	ilocos sur	santa cruz
60	lila central es	bohol	lila
61	lipata central es	cebu	minglanilla
62	luna central school	la union	luna
63	madridejos central es	cebu	madridejos
64	magcalape es	cebu	asturias
65	maguikay es	mandaue city	mandaue city
66	malacorong ps	cebu	argao
67	mandaue city cs	mandaue city	mandaue city
68	mandaue city cs sped center	mandaue city	mandaue city
69	mandaug es	bohol	calape
70	mangga es	cebu	tuburan
71	maoasoas es	la union	pugo
72	mohon es	cebu	sogod
73	montana ps	bohol	baclayon
74	nalvo norte es	la union	luna

	School (Basa)	Division	Municipality
75	namoroc-mabanbanag es	ilocos norte	vintar
76	nocnocan es	bohol	talibon
77	olivo es	cebu	tabuelan
78	opao es	mandaue city	mandaue city
79	ora west es	ilocos sur	bantay
80	oya-oy es	la union	bacnotan
81	paculob es	cebu	dumanjug
82	pagangpang es	ilocos sur	galimuyod
83	pagudpud central elementary school	ilocos norte	pagudpud
84	paknaan elementary school	mandaue city	mandaue city
85	palanas es	cebu	ginatilan
86	pangada-cabaroan es	ilocos sur	santa catalina
87	pinipin es	ilocos sur	santa cruz
88	rizal es	bohol	talibon
89	ronda central es	cebu	ronda
90	sacsac es	cebu	dalaguete
91	sagayad es	san fernando city	city of san fernando (capital)
92	sagpatan es	ilocos norte	dingras
93	sal-ing es	bohol	balilihan
94	sambagon es	cebu	pinamungahan
95	san cornelio es	la union	caba
96	san francisco central es	cebu	san francisco
97	san juan north cs	ilocos sur	san juan (lapog)
98	san marcelino es	ilocos norte	dingras
99	san pedro es	bohol	talibon
100	san sebastian es	cebu	samboan
101	san vicente-san agustin es	la union	agoo
102	santa fe central es	cebu	santa fe
103	santiago south central school	ilocos sur	santiago
104	sibago es	cebu	pinamungahan
105	sillon es	cebu	bantayan
106	sta. cruz cs	ilocos sur	santa cruz
107	talugtug elementary school	ilocos norte	solsona
108	tampaan es	cebu	aloguinsan
109	tan-awan es	cebu	oslob
110	tanglag es	la union	rosario
111	tanibag es	cebu	pinamungahan
112	taytay es	bohol	jetafe
113	tingub es	mandaue city	mandaue city
114	tonoton es	ilocos norte	piddig

	School (Basa)	Division	Municipality
I 15	trinidad central es	bohol	trinidad
I 16	tubigagmanok es	cebu	asturias
I 17	tuble es	cebu	moalboal
I 18	union es	bohol	ubay
I 19	upper tunghaan es	cebu	minglanilla
I 20	vito es	cebu	minglanilla
I 21	yati es	cebu	liloan
I 22	zaragosa es	cebu	badian

ANNEX III-EGMA FINDINGS

	MTBMLE		Basa		Regression	
G1 EGMA	BL	ML	BL	ML	Effect	P-val
Number Identification, items correct per minute	14.70	18.30	14.30	19.11	1.300	(0.159)
Quantitative Discrimination, percent correct	46%	57%	50%	60%	-0.021	(0.357)
Missing Numbers, percent correct	21%	27%	23%	29%	-0.005	(0.741)
Addition Problems, items correct per minute	5.86	7.01	6.23	7.22	-0.169	(0.691)
Subtraction Problems, items correct per minute	3.35	4.39	3.86	4.85	-0.318	(0.711)
Word Problems, percent correct	16%	18%	20%	25%	0.051	(0.070)
G2 EGMA	BL	ML	BL	ML	Effect	P-val
Number Identification, items correct per minute	31.55	33.36	28.83	32.30	2.126	(0.072)
Quantitative Discrimination, percent correct	76%	80%	77%	81%	-0.001	(0.944)
Missing Numbers, percent correct	41%	44%	40%	44%	0.025	(0.248)
Addition Problems, items correct per minute	10.33	10.64	9.96	10.49	0.370	(0.393)
Addition Problems Level 2, percent correct	41%	43%	40%	43%	0.590	(0.573)
Subtraction Problems, items correct per minute	7.98	7.25	7.36	6.92	-0.004	(0.885)
Subtraction Problems Level 2, percent correct	25%	28%	27%	27%	0.014	(0.780)
Word Problems, percent correct	25%	30%	29%	32%	-0.015	(0.651)
G3 EGMA	BL	ML	BL	ML	Effect	P-val
Number Identification, items correct per minute	40.48	42.25	40.82	43.37	0.586	(0.463)
Quantitative Discrimination, percent correct	89%	89%	90%	91%	-0.007	(0.491)
Missing Numbers, percent correct	51%	54%	53%	57%	-0.006	(0.727)
Addition Problems, items correct per minute	12.43	13.82	13.62	14.89	-0.293	(0.583)
Addition Problems Level 2, percent correct	54%	56%	57%	63%	0.002	(0.998)
Subtraction Problems, items correct per minute	8.46	8.91	9.20	9.54	-0.004	(0.863)
Subtraction Problems Level 2, percent correct	32%	36%	36%	39%	0.033	(0.292)
Word Problems, percent correct	38%	42%	40%	44%	-0.023	(0.505)

ANNEX IV-ALTERNATE REGRESSION MODELS

		letters	familiar words	unfamiliar words	oral reading fluency	reading comp.
MT	DiD	5.120*	1.505	0.195	3.662	0.0290
		(0.0889)	(0.487)	(0.893)	(0.173)	(0.388)
	DiD - controlling for ELLN schools	5.772	1.655	0.495	4.245	0.0192
		(0.100)	(0.489)	(0.735)	(0.176)	(0.606)
	DiD - excluding ELLN schools	5.769	1.628	0.465	4.224	0.0186
		(0.101)	(0.496)	(0.751)	(0.178)	(0.617)
	lagged DV	2.534*	3.953**	1.882	5.040	0.0388
		(0.0834)	(0.0280)	(0.134)	(0.278)	(0.186)
	lagged DV - controlling for ELLN schools	2.724	4.378**	2.119	5.995	0.0411
		(0.107)	(0.0356)	(0.113)	(0.269)	(0.213)
	DiD	-0.765	0.262	-0.157	0.742	0.0347
		(0.519)	(0.744)	(0.809)	(0.632)	(0.120)
Filipino - overall	DiD - controlling for ELLN schools	-0.484	-0.123	-0.182	1.491	0.0318
		(0.716)	(0.893)	(0.810)	(0.362)	(0.186)
	DiD - excluding ELLN schools	-0.487	-0.130	-0.186	1.474	0.0316
		(0.715)	(0.888)	(0.806)	(0.369)	(0.189)
	lagged DV	0.601	0.530	0.0787	1.675	0.0422**
		(0.545)	(0.546)	(0.902)	(0.215)	(0.0226)
	lagged DV - controlling for ELLN schools	0.290	-0.145	-0.113	1.891	0.0389*
		(0.802)	(0.878)	(0.880)	(0.207)	(0.0624)
	DiD	0.709	0.190	-0.160	2.502	0.0565
		(0.669)	(0.885)	(0.879)	(0.398)	(0.143)
	DiD - controlling for ELLN schools	1.247	0.140	0.311	3.729	0.0568
		(0.486)	(0.928)	(0.791)	(0.212)	(0.200)
Filipino - Grade 2	DiD - excluding ELLN schools	1.247	0.144	0.318	3.733	0.0565
		(0.486)	(0.927)	(0.788)	(0.213)	(0.202)
	lagged DV	1.686	0.0409	-0.350	3.344	0.0531*
		(0.329)	(0.974)	(0.683)	(0.203)	(0.0852)
	lagged DV - controlling for ELLN schools	2.211	-0.341	-0.229	3.791	0.0532
		(0.272)	(0.814)	(0.821)	(0.202)	(0.124)
	DiD	-2.311	0.313	-0.00469	-0.389	0.0198
		(0.111)	(0.788)	(0.995)	(0.739)	(0.300)
	DiD - controlling for ELLN schools	-2.175	-0.435	-0.505	0.0650	0.0141
		(0.182)	(0.729)	(0.553)	(0.961)	(0.470)
	DiD - excluding ELLN schools	-2.176	-0.457	-0.517	0.0269	0.0139
		(0.184)	(0.716)	(0.544)	(0.984)	(0.479)
Filipino - Grade 3	lagged DV	-0.378	0.363	0.269	-0.515	0.0249

		(0.770)	(0.706)	(0.713)	(0.601)	(0.151)
	lagged DV - controlling for ELLN schools	-0.738	-0.738	-0.255	-0.396	0.0160
		(0.400)	(0.400)	(0.750)	(0.724)	(0.417)
English - overall	DiD	0.115	0.206	1.486	0.243	0.0593
		(0.916)	(0.848)	(0.109)	(0.829)	(0.143)
	DiD - controlling for ELLN schools	1.377	-0.316	1.009	0.254	0.100
		(0.142)	(0.773)	(0.347)	(0.879)	(0.138)
	DiD - excluding ELLN schools	0.550	0.0869	1.441	0.277	0.0496
		(0.654)	(0.945)	(0.182)	(0.832)	(0.270)
	lagged DV	1.468*	0.0784	1.348	0.510	0.141**
		(0.0727)	(0.937)	(0.153)	(0.719)	(0.0352)
	lagged DV - controlling for ELLN schools	1.377	-0.316	1.009	0.254	0.100
		(0.142)	(0.773)	(0.347)	(0.879)	(0.138)
	DiD	-0.418	1.304	1.317	0.943	0.109*
		(0.792)	(0.497)	(0.400)	(0.629)	(0.0520)
English - Grade 2	DiD - controlling for ELLN schools	1.982	0.348	0.892	1.083	0.192*
		(0.181)	(0.843)	(0.538)	(0.680)	(0.0675)
	DiD - excluding ELLN schools	0.330	1.684	1.564	1.467	0.103
		(0.847)	(0.448)	(0.399)	(0.516)	(0.100)
	lagged DV	1.571	0.616	1.027	0.850	0.205**
		(0.234)	(0.706)	(0.408)	(0.704)	(0.0337)
	lagged DV - controlling for ELLN schools	1.982	0.348	0.892	1.083	0.192*
		(0.181)	(0.843)	(0.538)	(0.680)	(0.0675)
	DiD	0.544	-0.649	1.663	-0.157	0.0164
		(0.694)	(0.601)	(0.166)	(0.905)	(0.731)
	DiD - controlling for ELLN schools	0.675	-1.125	1.134	-0.141	-0.0336
		(0.578)	(0.399)	(0.312)	(0.934)	(0.727)
English - Grade 3	DiD - excluding ELLN schools	0.705	-1.238	1.242	-0.669	0.00355
		(0.660)	(0.377)	(0.349)	(0.658)	(0.947)
	lagged DV	1.241	-0.518	1.620	0.484	0.0416
		(0.237)	(0.661)	(0.106)	(0.742)	(0.650)
	lagged DV - controlling for ELLN schools	-1.125	-1.125	1.134	-0.141	-0.0336
		(0.399)	(0.399)	(0.312)	(0.934)	(0.727)

ANNEX V-POWER CALCULATIONS

At each data collection event, we propose to collect data from 240 schools, equally divided between Basa and non-Basa schools. In each school, we will sample 18 students, equally divided by grade. With this sample size, and the following assumptions, we expect to be able to measure a 0.17 SD difference in reading comprehension scores between Basa and non-Basa students across all grades combined, at the end of the 2015-2016 and 2016-2017 school years. For each individual grade cohort, we expect to be able to measure a change of at least 0.21 SD. This MDES is equivalent to the smallest effect size (0.17 SD) EDC measured in their 2015 evaluation report, indicating that the sample should be sufficient to measure the anticipated changes for the grades taken together.

Power Calculation Assumptions

- Clustering: intra-cluster correlation (ICC)=0.1762 (the highest ICC reported by EDC from their most recent EGRA testing for the 2015 evaluation report)
- Power: 80%
- Significance Level: 95% (using a two-sided test)
- Correlation between baseline and outcome measures: 30% (a conservative estimate based on the findings of several reading assessment studies across developing countries that have examined the variables that impact student reading scores, including a recent EGRA study conducted by SI in Malawi which identified access to books at home, socioeconomic status, and absenteeism as having large impacts on student reading scores.³¹)
- Attrition: 16.67% (a very high estimate, which we expect to be much lower, likely less than 5% in practice, though maintaining a high estimate initially ensures we do not under power the study due to larger than anticipated attrition).

³¹ USAID Malawi. (2010). Early Grade Reading Assessment: National Baseline Report. <www.eddataglobal.org/reading/index.cfm/Malawi%20National%20Baseline%20EGRA%202010.pdf?fuseaction=throwpub&ID=354>.

ANNEX VI-COST ANALYSIS FRAMEWORK

Social Impact (SI) will undertake a cost analysis to assess whether any positive impact of Basa is sufficient to justify additional funding. The results of the cost analysis will be presented in an investment case that provides a policy and context-relevant assessment of the merits of additional Basa funding. MTBMLE instruction is now a fully implemented policy in the Philippines. The investment case examines the merits of additional funding for Basa as a supplementary (or marginal) strategy or approach to the standard MTBMLE rather than a new policy or practice only implemented in schools supported by a Basa project.³² Precisely because the program is a supplementary approach, the Basa cost-effectiveness (C-E) analysis and investment case will actually refer to the MTBMLE+Basa approach.

The elements of the investment case include:

4. A detailed description of Basa's marginal costs;
5. Estimates of the marginal cost-effectiveness of Basa; and
6. A forward looking assessment of resources and funding required under alternative expansion scenarios developed with stakeholders.

Proposed Design

This cost analysis will assess the relationship between Basa marginal costs and marginal outcomes (i.e. gains in reading scores) using C-E analysis, an ex-post evaluation tool that enables decision makers to assess two or more courses of action by comparing their relative costs and outcomes, using an identical outcome criterion (Dhaliwal, Duflo, Glennerster, & Tulloch, 2012; Levin, 1985; Levin & Belfield, 2010).³³ The design for EQ2 is slightly different from conventional C-E analyses. First, conventional analyses compare costs and effects of two or more educational alternatives. For example, they estimate a C-E ratio for each intervention, and then they compare the ratios across the different alternatives. For the Basa C-E evaluation, there will be no comparison of costs and outcomes of different mother tongue education alternatives, because the Basa program is the only approach being evaluated. Moreover, due to the implementation approach, it is not possible to separate effects for different Basa components. Nevertheless, the evaluation will allow for exploring multiple Basa reading outcomes, for example, changes in reading letter sound, familiar words, unfamiliar word decoding, oral reading, and reading comprehension. It will also explore reading changes for single grades and in all grades together. It will provide multiple C-E ratios, but the ratios will all be for the same, single, Basa approach.

The design for EQ2 also differs from conventional C-E analysis in that most C-E analyses compare absolute total costs with absolute effects, for example, the total costs of different mother tongue instruction programs with the average achievement scores of students participating in the different programs. However, the Basa program is an intervention that adds to the standard MTBMLE program; hence, the analysis will estimate the additional (marginal or incremental) costs of Basa within the context of MTBMLE. Similarly, in the assessment of project outcomes (see Evaluation Question 1), SI is measuring the

³² When Basa was initially implemented national rollout of MTBMLE was not complete. However, future expansion of the Basa program would be in an environment where MTBMLE is currently implemented in the national system.

³³ Cost-benefit analysis can be used to assess a single approach or course of action by examining the rate of return on investment. Cost-benefit analysis requires that both costs and outcomes be expressed in monetary terms. While improving early reading proficiency may have longer term outcomes that can be expressed as a monetary value, the short evaluation period limits the analysis to the intermediate objectives of improved reading scores. This limits the evaluation to an assessment of the cost-effectiveness of Basa relative to an appropriate comparison.

differences in reading scores between students attending a school where the Basa program is implemented versus similar students in schools implementing the standard MTBMLE. Hence, the analysis will estimate the additional (marginal or incremental) effects or gains in reading test scores. Because both marginal costs and marginal reading scores will be estimated, the C-E analysis proposed for EQ2 will be a marginal C-E analysis, not an analysis of absolute costs and effects as most conventional C-E analysis.

To sum, and as it will be developed below, the marginal C-E ratio for Basa will give information on the average per-student costs that need to be added to the standard MTBMLE program, to produce an incremental gain in reading test scores.³⁴ It will represent the marginal costs of producing improvements in early grade reading. In other words, the C-E analysis will center only on the Basa program; the standard MTBMLE program (its costs and absolute effects) will be excluded from the C-E analysis.

Additional funding to expand the reach of the Basa approach to more students could take a number of forms and each of these choices could impact both the costs and expected results. Different cost alternatives will be presented in an investment case for decision-makers to use in their deliberation over future funding. The final investment case product will describe this proposed articulation and estimate the resource requirements for expansion and expected impact for scenarios identified by USAID and GoPH. To be useful for decision makers in their deliberation over additional funding to expand Basa, the costing of alternative expansion scenarios must take into consideration the implications for expanding Basa in the current policy context.

Step 1: Estimating Basa marginal costs

An ingredients approach will be utilized for estimating Basa's costs.³⁵ The approach consists of dissecting an intervention in its different components and activities, specifying all the ingredients or resources required to create or replicate each activity, costing or placing a monetary value to the ingredients, and obtaining the total unit costs of the intervention.

A full list and description of project components, activities, and inputs (ingredients) will be developed through a review of project documentation and key informant interviews. The SI evaluation team will develop a **Basa Marginal Costs Worksheet**. The Worksheet will list all components, activities, and ingredients of the Basa program and it will be the main tool for estimating Basa costs. Before describing each step of the ingredients model, several points should be made regarding the design of the Basa Marginal Costs Worksheet:

- *Agreement on the Basa Marginal Costs Worksheet:* The SI evaluation team has developed a Basa Marginal Costs Worksheet, which is being used to engage with stakeholders to develop a comprehensive understanding of the Basa program. The template will be discussed and revised to best represent the complexity of the Basa program. It is unfeasible to have reliable costing estimates without an accurate and comprehensive list of the program's components, activities, and ingredients.
- *Program scope (marginal C-E analysis):* It is essential to distinguish and separate Basa from standard MTBMLE activities, ingredients, and costs. The Basa Marginal Costs Worksheet will only include the activities and ingredients that comprise the Basa intervention, and it will exclude the

³⁴ The evaluation team will have flexibility in how an increment is defined, which can be defined through discussions with USAID and DepEd at the start of endline data analysis.

³⁵ The ingredients approach is taken from Levin (1985) and Levin and Belfield (2010), and adapted for the Basa evaluation. The authors have used the approach for the cost-effectiveness evaluation of similar programs, for example early reading programs in the United States (Hollands et al., 2016).

standard MTBMLE activities. The analysis will cost only the additional activities and resources needed to create the Basa program and that are key for the Basa outcomes. This includes activities such as setting up, designing, or monitoring the program, and it excludes activities that are complementary but not part of Basa, for example, any outreach or communication or other related activities done aside of Basa, if any.

A likely scenario is that Basa implementation involves activities like teacher training and materials that substitute components of standard MTBMLE delivery. For example, DepEd also provides training to teachers in mother tongue teaching and provides mother tongue Teaching and Learning Materials (TLMs). It appears that the Basa teacher training substitutes the DepEd training, but the Basa training is a scaled-up or improved version of the DepEd training; the content and intensity of the training and the content and physical characteristics of the materials are believed to add to the MTBMLE training.

SI will revise the Basa Marginal Costs Worksheet to incorporate stakeholder views regarding the nature and magnitude of substituting investments between the DepEd MTBMLE and the Basa program.

- *Multiyear program:* The Basa program is a multiyear intervention: it started in January 2013 and continues until December 2016. The Basa Marginal Costs Worksheet will cost activities for each year of intervention; and it will also allow for calculating total multiyear costs and for analyzing the distribution of costs by year of implementation.

One challenge in the design of the Worksheet is to have a clear understanding of the program implementation timeline: when each activity was implemented and for how long. Some foundational activities might have been implemented only in Year 1, and others might be implemented all along the entire duration of the program. Similarly, other activities are implemented only in later stages of program implementation. Therefore, the Costs Worksheet will consist of five worksheets: one per year of implementation and one for the total implementation costs.

- *Multiple stakeholders:* Although EDC is the main provider of the Basa program, other stakeholders are involved in the program either as direct providers of some activities (mainly the DepEd), as contributing partners, or as third party contractors. Similarly, when the success of an education intervention depends on the participants' contributions and resources, the beneficiaries are also stakeholders in the program and the costs of the intervention should account for the costs incurred by the participants. In some programs, the participants contribute directly to the success of the activity, by paying tuition, providing for transportation, food, or book expenses.

In addition to allowing for multiple-years costing, to the extent possible the Basa Marginal Costs Worksheet will include the costs volunteered or paid by all stakeholders involved, allowing for an analysis of the distribution of costs by the parties involved or contributing to the program.

- *Basa languages of instruction and grades:* Another caveat in the design of the Basa Marginal Costs Worksheet is the cost distribution by languages of instruction and grades. The Worksheet is designed to include total costs by year of implementation: for all languages of instruction and grades. If disaggregated cost were available (mostly for teacher training and TLM) and they differed between languages and grades, the template Worksheet could be redesigned to allow for more detailed cost reporting: for each year of implementation, it would have costs by language and by grade, and a worksheet for the yearly total.

SI will revise the Basa Marginal Costs Worksheet to incorporate stakeholder views regarding the relevance of accounting for costs differences by language and grades, in addition to year of implementation.

With the considerations in mind, the SI evaluation team will apply the ingredients approach to the marginal C-E analysis of the Basa program, and will undertake five sub-steps to estimate Basa's marginal costs: (a) identify the components and activities of the Basa program, (b) determine all stakeholders involved in the Basa program; (c) identify the ingredients or resources for each activity; (d) assign a monetary value to each ingredient; and (e) obtain total unit costs.

(a) Identify the components and activities of the Basa program. To be able to identify and cost all the ingredients involved in replicating the Basa program, it is essential to have a good understanding of the complexity of the program and to identify its constituent elements. Since Basa is a multiyear program, it is also essential to understand the timing of the implementation of the different components, to be able to obtain annual as well as total (multiyear) costs.

The core components of the Basa program are the teacher training activities and the revision and development of teaching and learning materials, both to support mother tongue education in grades 1 to 3. However, the implementation of the core components and activities requires supporting actions and processes, without which the activities would not have been implemented the way they were. In principle, the Worksheet would cost ingredients for management, monitoring and evaluation, and outreach and communication activities, unless the discussions with stakeholders suggest that these ingredients are not part of the Basa supplementary activities.

A full list of project activities will be developed through a review of annual work plans and progress reports, and through key informant interviews. It was already mentioned that Basa and the standard MTBMLE program might differ not in the actual activities involved (for example, both do teacher training for mother tongue teaching and provide mother tongue materials) but in the content and intensity of the training, and the content and quality of the instructional materials. If so, these differences might not be visible in the activities list per se, but rather be reflected in higher personnel costs for teacher training (for more intensive, longer or better quality training) and higher personnel costs for the design and development of better instructional materials. Similarly, while both interventions rely on teaching and learning materials, the differences might not be reflected in list of activities per se, but rather in the costs involved in acquiring better quality materials.

All components and activities of the Basa program will be entered in the Basa Marginal Costs Worksheet.

(b) Determine all the stakeholders involved in the program. The Basa program is mainly designed and implemented by EDC with USAID, although some of the Basa activities rely on the DepEd's provision. In addition to EDC-USAID and the DepEd, Basa counts on the contribution of many other partners, third party contractors, and participants' direct contributions.³⁶

All stakeholders in the Basa program will be listed in the Basa Marginal Costs Worksheet.

³⁶ In some cases, participants contribute indirectly, particularly when they are asked to attend a program outside their normal working hours. Hence, the participant's costs should also include the cost of their time (for example the share of the income foregone or the opportunity cost of leaving a second job for participating in the program, or the costs of child care when they do household work). These economic or opportunity costs are unpaid/unbudgeted inputs that are incorporated in the some C-E analyses. In the case of Basa, it is likely that these indirect participants' costs will not be additional Basa costs but will also be present in the standard MTBME, so they would not need to be costed.

(c) Identify the ingredients or resources for each activity. Once a description of the Basa program components and activities is developed and the stakeholders involved are identified, the third step in estimating the Basa marginal costs is to identify the ingredients or resources used by all stakeholders to implement each activity. While most program resources might be included in the budgetary expenditures of the Basa program, there will be other unpaid/unbudgeted resources that are also central in the production of the Basa outcomes. In other words, the analysis will identify all ingredients required to create or replicate the program activities, budgeted by Basa or contributed by other partners.

Most education programs involve the following ingredients:

- *Human resources:* Personnel costs are by and large the bulk of education intervention's costs. This would include the salaries (gross, including benefits) of all core personnel involved in the Basa activities: program coordinators, teacher trainers and specialists, instructors and facilitators, supervisors, teacher aides, and textbook design specialists. If the Basa activities are offered during instructional hours and participating teachers are taken out of their classrooms, substitute teachers might be needed and they should be added to the personnel needs. In addition, the human resources ingredient will include salaries of all other consultants, program support, administrative, monitoring and evaluation, secretarial personnel, equipment maintenance labor, and other personnel. Finally, the personnel costs will include the estimated salaries of volunteers and other paid personnel contributed either by the Basa team or other partners. Ideally, to estimate the personnel costs for each activity, all personnel should be listed in terms of their roles, qualifications, and dedication (part-time and full-time personnel).
- *Facilities:* This includes the costs of any space needed for the implementation of each of the Basa activities: teacher training classrooms, offices for program support staff, storage space for the TLM materials, etc. Ideally, to estimate the facilities costs for each activity, all facilities should be listed in terms of their dimensions and any other instructional characteristics required.
- *Materials and supplies:* One of the key components of the Basa program is the revision and development of TLMs. The costs of development these materials most likely will be personnel costs, listed above. However, there will be other non-personnel costs involved, such as books, teacher training videos, other printed instructional materials like teacher training guides, paper and other supplies, and even the costs of the standardized tests and surveys used for Basa monitoring and evaluation.
- *Equipment:* Computers, software, other instructional equipment, classroom and office furniture, printers, and other office machines are examples of the equipment costs that would be included in this category. All equipments but mostly the instructional equipment should be listed in terms of their brand and model.
- *Other miscellaneous costs:* This ingredient refers to any other costs not included in the other categories (for example, utilities, transport fees, etc.).

The Basa Marginal Costs Worksheet will list all ingredients for each of the Basa activity and component.

(d) Assign a monetary value to each ingredient. When the activities, stakeholders, and ingredients necessary to implement or replicate the Basa program are identified, the following step is to assign a monetary price to the ingredients. The simplest method is to use market prices, which represent the costs of buying a particular ingredient in the market. The design would consider actual costs (USAID Basa contract costs with EDC) as good approximation of market costs. They may not be representative of any other organization's costs, but they are a good approximation of the market value of ingredients.

Basa project inputs include a mixture of investments in physical, human capital, and consumable items. Several considerations have to be made when costing the different inputs:

- *Human resources salaries:* Market prices can be used for salaries, which would be the price of recruiting the personnel needed for each of the program's activities. Teacher training and the revision and development of TLMs are the two core components of the Basa program. Both activities tap on human resources so personnel costs are expected to concentrate the bulk of the costs. If any of the instructors, teacher trainers, or other personnel were public school teachers, the costing of the personnel ingredient will use DepEd expenditure data instead of market prices. In both cases, market or civil service prices, gross and total salary expenditures (including pension, social security, etc.) should be used.

One possible difference between Basa and the standard MTBMLE program is the intensity of the teacher training. This should somehow be reflected in the costs: for example, higher human resources costs (compared to the standard program) for full-time training, for part-time training of longer duration, or even for teacher training that relies on teacher aids, mentors, or other type of follow-up.

Scaling up a program may need more qualified personnel than a reduced version of the program, and as a result it can be difficult to find appropriate candidates. In this case, costing an expanded version of the Basa program might need to allow for higher market salaries than the salaries paid for the reduced version.

- *Facilities:* Like for the other ingredients, market prices can be used to cost the facilities needed to run the program. One way is to take their annual rent or lease value, regardless of whether the facility is rented or owned. If facilities were owned, the rent value of the facility would be the price the owner would get if the property (classroom, office space, or other instructional space used by Basa) was put in the market for rent.

Another method for putting a monetary value to owned facilities, more sophisticated than considering their rent or lease value, is to consider the depreciation and un-depreciated interest forgone (Levin, 1985). Facilities are assets that have a construction or replacement price, and they have a useful life that is generally longer than the intervention life. Basa teacher training classrooms, for example, could be used above and beyond the Basa implementation years, and attributing the full facilities costs to the program would overestimate costs. Moreover, facilities depreciate when used, that is, their price diminishes every year they are used. To put a value to the owned facilities used for Basa, it is important to account for the annual depreciation costs. This is done by dividing the replacement value of the facility by its lifespan years.³⁷

In addition to depreciation costs, facilities have an investment opportunity cost while they are not used; in other words, the unused or un-depreciated resources could have been used for another investment for financial return. To put a value of the opportunity cost or interest forgone, the un-depreciated cost (the replacement value minus the depreciation costs) is multiplied by a given

³⁷ For example, the depreciation costs of a facility that has a replacement value of 1,000,000 and a lifespan of 25 years is 40,000 (1,000,000 divided by 25) for each year of use.

interest rate.³⁸ The total annual value a facility is calculated then by adding the annual depreciation cost and the annual opportunity or interest forgone costs.³⁹

This is the method mostly used for costing facilities for for-profit investments. However, Levin proposes a simpler, more straight-forward method for annualizing the cost of facilities. It entails multiplying the facility's replacement cost by an annualization factor, for different lifespan years and interest rates (1985, p. 70).

As stated, the rent or lease value of facilities is the simplest method to assign a monetary value to owned facilities. But if the more sophisticated method of considering depreciation and interest forgone was used, initial assumptions about the replacement value and useful life of facilities will be developed through discussions with stakeholders. If facilities were owned and costs were a concern, the analysis can include a sensitivity analysis of the annual cost estimates to valuing method (rent versus depreciation plus interest forgone) and to the major underlying assumptions (replacement and lifespan years).

- *Materials and supplies:* In addition to human resources, both core activities require instructional materials, the acquisition of books (purchased or donated), and other supplies to produce the books. In addition, other management and program support activities are high on material and supplies needed, particularly the monitoring and evaluation and outreach and communications activities. Market purchasing prices can be used to estimate the value of the materials and supplies needed for the program.

However, as with facilities, materials and supplies often have a longer lifetime than the intervention years. In that case, it is recommended to use annual market rent or lease prices rather than market purchasing prices. The more sophisticated annualized depreciation costs and interest rate for un-depreciated portion, explained for facilities, could be applied for materials and supplies.

- *Equipment:* The procedure for valuing the equipment used for the program is similar to the one used to cost the facilities: getting the rent value is the simplest way, but the more sophisticated method of using depreciation costs and interest rates for the un-depreciated portion can also be considered.
- *Other miscellaneous costs:* The method will depend on the ingredients included in this category. For example, market prices can be used to estimate transport costs, even when public transportation is the preferred transport mean.

All costs will be entered in the Basa Marginal Costs Worksheet, for each component, activity, stakeholder, and ingredient.

After a monetary value has been assigned to all the activities' ingredients, costs will be summed up to obtain total annual costs. As mentioned, some education interventions charge fees to the participating

³⁸ Following the previous example, a facility that has a replacement value of 1,000,000 and a depreciation cost of 40,000 has an un-depreciated cost of 960,000 (1,000,000 minus 40,000), which gives an annual opportunity cost of 48,000 at a 5% interest rate (960,000 times 5%).

³⁹ In the same example, the annual value of the facility would be 88,000, or 40,000 of depreciation costs added to the 48,000 interest forgone costs.

teachers. If so, the participant fees should be deducted from the total annual cost, and it will be necessary to obtain total annual net costs. Annual costs will be added to obtain the total multiyear cost.

A point to consider for multiyear programs like Basa is to adjust costs for inflation; in other words, to take into account the possible changes in the price of the ingredients over the program implementation years. Cost data will be provided by EDC and they will be available in US dollars. Prices of the Basa ingredients will be presented in real values. They will be converted from nominal (e.g., prices in 2013 dollars) to real values (prices in 2016 dollars). The analysis will use the Consumer Price Index (CPI) available from the US Department of Labor, Bureau of Labor Statistics (US Department of Labor, 2016). A preliminary look indicates that average annual inflation rates in the US are below 1.5 percent in the Basa implementation years.⁴⁰ The simplest option is to take the total annual net costs and adjust them for inflation, instead of adjusting the costs of each individual activity and ingredient.

Another point to consider for multiyear programs is the spending pattern over the years (Levin, 1985). When the costs are incurred (equal annual payments made over the years, most payments made in the yearly years, or most payments made in the later years) will affect total program costs. Postponing costs of an investment to later years reduces the total monetary sacrifice because of the interest rate that could potentially be obtained if the unused money is put into an alternative investment (for example, in the bank). On the other hand, making most payments in the early years reduces the available money that could potentially be put into an alternative investment and the potential earned interests, therefore increasing the total monetary sacrifice of the investing. In sum, resources needed in the earlier stage of the project implementation (if it were to be replicated) are weighted more heavily than those needed in later stages.

To neutralize the effect of the spending pattern when annual costs are added up, the Present Value (PV) of the total multiyear Basa costs will be calculated. The PV is a method to estimate the present value of a cash flow over the years.⁴¹ Both total multiyear costs (total annual costs added up) and their PV will be calculated and compared.

(e) Obtain average unit costs. The annual or multiyear costs obtained in step (d) gives the total cost of the Basa program. To determine the unit costs of creating or replicating a unit gain in reading achievement (required for the C-E analysis), the next step is to calculate average costs per unit; in this case, annual or multiyear Basa costs per-student. The core activity of Basa is the mother tongue teacher training program accompanied by instructional materials, so the main beneficiaries of the program are the participating teachers. To derive average per-student costs and align the cost's unit with the outcome's unit, it is necessary to divide the total costs by the total number of students reached by the participating

⁴⁰ The issue of inflation would have been slightly more problematic if the cost data were available in Philippine Pesos (PHP), where inflation rates varied more than the US rates. In the Philippines, rates ranged from a highest average of about 5 percent in 2014 to a lowest point of 0.5 percent in late 2015.

⁴¹ The formula of the PV is: $PV = \sum_{t=1}^4 C / (1 + r)^{t-1}$, where C are the costs (in this case, the total multiyear costs), r is a chosen discount rate, or a social interest rate required to bring future cash flows to their present value. The discount rate varies depending on the country. The Basa investment is in dollars, and therefore the discount rate to be used will be the US rate. Some studies show that rates range from 7 to 10 percent (Dhaliwal et al., 2012; Levin, 1985).

teachers. Depending on the data available, the costs per-student will be done on an average annual or multiyear cost.

The total number of students benefiting from Basa and the average annual costs per-student will be entered in the Basa Marginal Costs Worksheet.

Step 2: Elaborating estimates of marginal cost-effectiveness (C-E)

Building on the analysis of marginal costs in step 1 of EQ2 and using gains in reading comprehension scores obtained from EQ1, SI will estimate C-E ratios for Basa. These ratios will be expressed as the costs and outcomes of the additional Basa approach relative to the standard MTBMLE program, or the marginal C-E ratios. Costs will be expressed as the per-student cost of Basa inputs.⁴²

Outcomes will be expressed as unit increments in reading scores of Basa.⁴³ The marginal C-E ratio will, therefore, represent the average additional per-student costs required to produce a unit increase in early grade reading.

A very high marginal C-E ratio or no difference in reading outcomes could be interpreted as evidence against the benefit of continuing or expanding Basa in its current form. However short of these extreme results, the case for or against additional funding may not be clear. Depending on the marginal costs of Basa and the magnitude of differences in reading outcomes it would be conceivable that the standard MTBMLE produced year on year gains in reading ability at a similar or lower cost than Basa, even if Basa demonstrated a treatment effect of higher reading scores.⁴⁴

The SI team will consider multiple Basa reading outcomes, for example, change or improvements in reading sub tests like letter sound, familiar words, unfamiliar word decoding, oral reading, and reading comprehension. It will also consider reading changes across the same grades, across multiple grades, improvements in all grades together and improvements by grade. As a result, the team will assess and compare multiple marginal C-E ratios, all for Basa but considering different measures of the reading outcomes.

Marginal C-E ratios will be present in a descriptive table, comparing ratios for the different outcomes.

Step 3: Assessing the investment case for additional funding

Evaluating the marginal cost-effectiveness of Basa implementation to date is a key decision point in assessing the merits of expanding of the program. A program that does not provide an improvement in outcomes or provides improvements at an unacceptably high cost is a poor candidate for wider implementation. However, assessing the potential of additional Basa funding also requires consideration of the new implementation context. With the completion of the rollout of MTBMLE, future Basa expansion would involve schools currently implementing MTBMLE. Assessing Basa as an investment requires

⁴² The Basa program trains teachers to work with students in grades 1 to 3. To calculate costs per student, one option is to define the population as any student who passed through all three grades during the duration of the program. This option would solve the problem of counting each student several times. Social Impact will incorporate stakeholder views regarding how to best define or count the student population for calculating per student costs.

⁴³ The design will explore different measures of the outcome unit from EQ1: for example, a target increase in words per minute, an increase in one word per minute, or the amount required to lift the average students to a relevant DepEd standard.

⁴⁴ Any positive difference in reading outcomes from the reading assessment would permit the calculation of a ratio between Basa costs and improvements in reading scores attributable to Basa. However, in absence of information about the relationship between costs and outcomes of the standard MTBMLE it would be difficult to assess this ratio as a standalone argument for or against additional investment in Basa.

consideration of the articulation of the relevant Basa inputs with the ongoing DepEd delivery system of MTBMLE. These articulation decisions would include (among others): Does the Basa teacher training replace current DepEd MTBMLE training in the new areas or is the Basa training provided in addition to DepEd training? Do materials developed to implement Basa replace current MTBMLE materials or are they provided as additional materials? Does the expansion scenario assume DepEd production of the Basa materials or USAID production?

As mentioned at the beginning, a shortcoming of the possible alternative scenarios for scaling-up any of the Basa components/activities, as opposed to replicating the entire program, is that the marginal C-E design will not provide independent costs and effects of each of the Basa components or activities. Only the costs and effects of the entire Basa program will be estimated, and the marginal C-E ratios will be for the entire program. The investment case will consider costing options for scaling up, but it is unable to identify effects, and hence CE ratios, for each component.

The final investment case product will describe this proposed articulation and estimate the resource requirements for expansion and expected impact for scenarios identified by USAID and GoPH.

Data Sources & Management

Through document review and key informant interviews the SI team will develop a Basa Marginal Costs Worksheet template, as a tool for the marginal C-E estimation. Key informant interviews with Basa staff and DepEd officials at the national and district level will enable SI to develop a comprehensive understanding of the inputs of the standard MTBMLE program and of the differences with the Basa program.

A result of the informant interviews and any other supplementary desk information will serve to revise the Basa Marginal Costs Worksheet, to arrive a consented Worksheet depicting the complexity of the Basa program. The marginal unit cost estimates will be accompanied by documentation of all decisions and assumptions regarding the program activities, stakeholders, ingredients, and prices.

Limitations

A limitation of the marginal C-E analysis as a policy making tools is that it will fail to compare the C-E of alternative interventions to Basa. Only the Basa marginal C-E will be estimated. Nevertheless, the exercise will give rigorous information of the attributes and merits of Basa to improve early grade reading, in relation to the economic investment. Most importantly, it will provide a detailed analysis of the cost structure and set the basis for a discussion of different possible scenarios for scaling up Basa.

A second limitation of the marginal C-E analysis as an input in the investment case is that it will fail to provide information on how cost-effective would be to expand selected components/activities of the program. This is because the C-E measure that will result from this EQ will be a measure for the entire Basa program. While the marginal cost of scaling-up selected components/activities could be estimated and derived from the cost analysis, the marginal effects of implementing independent components will be unknown.

ANNEX VII-INSTRUMENTS

STUDENT ITEMS⁴⁵

STUDENT BACKGROUND

1. [Code student gender] ☐ Male ☐ Female
2. What is your age? _____
3. What language to you speak most at home? (*Don't read these options to the student. If the student is slow to respond, wait up to 8 seconds before prompting "what language do you speak when you talk to your mother, father, siblings, etc.?"*).
 - a. Ilokano
 - b. Cebuano
 - c. Filipino
 - d. English
 - e. Other, please specify _____
 - f. Refuse to respond
4. What language do you usually speak with your friends?
 - a. Ilokano
 - b. Cebuano
 - c. Filipino
 - d. English
 - e. Other, please specify _____
 - f. Refuse to respond
5. Did you attend Kindergarten?
 - a. No
 - b. Yes
 - c. Don't know
 - d. Refused

READING

6. Does anyone at home read to you?
 - a. No (*Skip to QUESTION 8*)
 - b. Yes
 - c. Don't know (*Skip to QUESTION 8*)
 - d. Refuse to answer (*Skip to QUESTION 8*)
 7. How often does someone at home read to you?
 - a. Hardly ever
 - b. Only sometimes
 - c. 2-3 times a week
 - d. Every day
 - e. Don't know
-

⁴⁵ These items were requested of students alongside EGRA and EGMA instruments. The EGRA and EGMA tools are omitted, since they are too long to practically include. These tools are available upon request.

f. Refuse to answer
Do you read on your own at home?

- g. No
- h. Yes
- i. Don't know
- j. Refuse to answer


8. Do you do homework at home?
- a. No (*Skip to QUESTION 11*)
 - b. Yes
 - c. Don't know (*Skip to QUESTION 11*)
 - d. Refuse to answer (*Skip to QUESTION 11*)
9. Does anyone at home help you with your homework?
- a. No
 - b. Yes
 - c. Don't know
 - d. Refuse to answer
10. How do you feel about reading?
- a. Happy
 - b. Neutral
 - c. Unhappy
 - d. Don't know
 - e. Refuse to answer

FEELINGS ABOUT SCHOOL

11. Do you feel happy or sad about coming to school?
- a. Happy
 - b. Sad
 - c. Don't know
 - d. Refuse to answer
12. How much do you think you learn at school?
- a. Not anything
 - b. Not much
 - c. Some
 - d. A lot
 - e. Don't know
 - f. Refuse to answer
13. Do you think school is boring?
- a. No
 - b. Sometimes
 - c. Yes
 - d. Don't know
 - e. Refuse to answer

PRINCIPAL SURVEY









Symbols used in this booklet:

 Silent reading: instructions for the assessor

➡ (Move on)

Note to administrator: ☐ =single choice allowed ☐ =Multiple choice allowed

Questions to fill out before beginning the survey

1.  Province Name: ☐ Bahol ☐ Cebu ☐ Ilocos Norte ☐ Ilocos Sur
☐ La Union ☐ Mandaue City
2.  School Name: _____
3.  DepED School ID _____
4.  Municipality Name _____
5.  Barangay Name _____
6.  Type of school ☐ Elementary ☐ Central ☐ Integrated
7.  Enumerator ID _____
8.  School GPS
Coordinates _____
9. Survey Date (mm/dd/yyyy): _____
10. Time survey started: _____

STOP: ADMINISTER CONSENT DOCUMENT

As previously mentioned, I am from [DATA COLLECTION FIRM], an independent data collection firm working with USAID and the Department of Education (DepEd) in the Philippines. We are conducting a study to assess the impact of a project that supports teachers and schools in their efforts to teach children using the mother tongue. This school has been selected through a process of statistical sampling to take part in this study, which will involve an interview with you. The results of our analysis will be used by DepEd and USAID to help identify additional support that is needed to help ensure that all children in the Philippines become good readers.

If you choose to participate, your responses will be strictly confidential. Your responses will be combined with those from other schools in the study and presented in the form of summary tables. Neither you nor your school will be individually identified or named in the report. There are no anticipated risks or benefits to you personally for participating in this study, though information collected in this study may benefit others in the future by helping to identify areas where additional support is needed. The interview will last approximately 45 minutes. We will return to this school at the end of this school year and the end of next school year to repeat the same procedures.

You do not have to participate if you do not wish to. Once we begin, if you don't want to answer a question, that's ok.

Do you have any questions? Do you agree to participate?

CONSENT STATEMENT: I understand and agree to participate in this reading research study.

SIGNATURE: _____

Please feel free to contact Yazmin Tolentino (63(2)5484577) or James Fremming from Social Impact (001-703-465-1884 ext.208) at should you have questions about the study.

11. Check box if consent is obtained: ☐ Yes ☐ No

12. What is the gender of the respondent? ☐ Male ☐ Female

13. What is your name? "Please be advised that all your responses will be kept confidential and will not be individually linked to your school, nor will it show up in our report. We will, however, request for your full name for the purpose of re-visiting the school later this school year and next school year."

First Name _____
Middle Name _____
Last Name _____

14. What is your designation at this school?

☐ School Head/Principal
☐ Teacher-in-Charge
☐ Assistant Principal
☐ Other (specify) _____

15. How long have you been in your position as School Head/Principal/TIC or Assistant Principal (years and months)?

Number of Years: Number of months:

16. May I know what is your highest level of qualification?

☐ Less than Bachelor's ☐ Bachelor's Degree ☐ Master's Degree ☐ Doctorate

17. Have you received special training or taken courses in school management?

☐ Yes ☐ No [➡ to Q.19] ☐ Don't know [➡ to Q.19]

18. If **yes**, how many training days in school management did you receive in total over the past school year?

Days: ☐☐ ☐ Don't know

19. In the last four weeks, how many days were you.... (answer each option, for 0 enter 0)

Physically present at school	<input type="checkbox"/> <input type="checkbox"/>
Officially away	<input type="checkbox"/> <input type="checkbox"/>
Sick/personal leave	<input type="checkbox"/> <input type="checkbox"/>
Public/Non-working holiday	<input type="checkbox"/> <input type="checkbox"/>
Other _____	<input type="checkbox"/> <input type="checkbox"/>

20. What was the first day of school this school year? Month _____ Day _____ Year 2015

21. Since the start of the current school year, was this school closed or were there days when classes were not being taught, during the regular school calendar (other than holidays)?

☐ Yes ☐ No [➡ to Q.24] ☐ Don't Know [➡ to Q.24]

22. If **yes**, how many days was school closed or were classes not being taught?

Number of Days: ☐☐ ☐ Don't know

23. Why was the school closed?

☐ Professional days ☐ Natural disaster
☐ Other _____

24. A: At what time does the school day start?

Hours ☐☐ **Minutes** ☐☐

24. B: At what time does the school day end?

Hours ☐☐ **Minutes** ☐☐

25. How many minutes are allocated for assembly, break and lunch each day? (enter 0, for 0 minutes)

Assembly (Minutes)	<input type="checkbox"/> <input type="checkbox"/>
Breaks (Minutes)	<input type="checkbox"/> <input type="checkbox"/>
Lunch (Minutes)	<input type="checkbox"/> <input type="checkbox"/>

26. What is the highest grade instructed at this school? Grade: _____

27. What is the lowest grade instructed at this school? Grade: _____

Teachers at the School

28. How many of the following teachers are currently employed at your school?

	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Plantilla (DepEd payroll) Teachers						
Volunteer Teachers						
Local Government Paid Teachers						
Other						
Total						

29. How many of the following teachers are female?

	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Plantilla (DepEd payroll) Teachers						
Volunteer Teachers						
Local Government Paid Teachers						
Other						
Total						

30. How many plantilla teachers were absent today (or on the last day school was in session)? [Enter 0, for 0]

Grade 1:
Grade 2:
Grade 3:

31. How many plantilla teachers arrived after the start of classes (late) today? [Enter 0, for 0]

Grade 1:
Grade 2:
Grade 3:

32. What do you do with a class whose teacher is absent? [DO NOT READ OPTIONS! JUST MARK BASED ON ANSWER(S)]

Principal takes class ☐
Let class proceed without the teachers ☐
Join all the students in one class (under other teacher) ☐
Assign a school volunteer ☐
Other: _____ ☐

33. Does your school take teacher attendance?

☐ Yes ☐ No ☐ Don't know

34. Who records teacher attendance information?

Principal

☐

Assistant Principal

☐

Other (please specify): _____

35. Could I please see your teacher attendance records for the previous month?

(How frequently was the attendance completed?)

Records not available ☐

Attendance completed DAILY ☐

Attendance completed WEEKLY ☐

Attendance completed BI-WEEKLY ☐

Attendance completed MONTHLY ☐

Other (please specify): _____ ☐

36. Do you have a copy of each of the K to 12 (or applicable grades) curricula in Mother Tongue, Filipino and English that teachers can consult regularly?

For Mother Tongue ☐ Yes ☐ No

For Filipino ☐ Yes ☐ No

For English ☐ Yes ☐ No

37. How many Grade 1, Grade 2 and Grade 3 teachers have been trained in the current mother tongue-based DepEd curriculum?

Grade 1: _____ Grade 2: _____ Grade 3: _____

38. Who provided this training?

☐ DepEd

☐ USAID Basa Pilipinas/EDC

☐ Other, specify: _____

39. Do you or one of your staff check teachers' lesson/log plans? If so, how frequently?

No, never ☐

Yes, once a year ☐

Yes, 2-3 times a year ☐

Yes, 1-2 times every month ☐

Yes, once every week ☐

Yes, 2-3 times a week ☐

Yes, daily ☐

Other ☐

Don't know ☐

40. How often do you visit / observe classrooms?

- Never ☐
- Once a year ☐
- Yes, 2-3 times a year ☐
- 1-2 times every month ☐
- Once every week ☐
- 2-3 times a week ☐
- Daily ☐
- Others: _____ ☐
- Don't know ☐

School Resources and Facilities

41. At the beginning of this school year, did your school have textbooks or learners manuals for Grade 1, Grade 2 and Grade 3 students in the appropriate language of instruction, according to current DepEd MTB-MLE policy? [If yes to all ➡ to Q.43]

- Grade 1: ☐ Yes ☐ No
- Grade 2: ☐ Yes ☐ No
- Grade 3: ☐ Yes ☐ No

42. If NO, how long after the beginning of the school year did you receive the appropriate textbooks or learners manuals?

Grade 1: Months: _____ Weeks: _____

Grade 2: Months: _____ Weeks: _____

Grade 3: Months: _____ Weeks: _____

43. At the beginning of this school year, did your school have the appropriate number of textbooks or learners manual for all your Grade 1, Grade 2, and Grade 3 students, according to current Department of Education (DepEd) policy? [If yes to all, ➡ to Q.45]

- Grade 1: ☐ Yes ☐ No
- Grade 2: ☐ Yes ☐ No
- Grade 3: ☐ Yes ☐ No

44. If **NO**, how long after the beginning of the school year did you receive the missing textbooks or learners manuals?

Grade 1: Months: _____ Weeks: _____

Grade 2: Months: _____ Weeks: _____

Grade 3: Months: _____ Weeks: _____

45. Do you have a school library?

Yes ☐ No ☐ [➡ to Q.47] Don't know ☐ [➡ to Q.47]

46. How frequently does a class visit a library?

_____ times per _____

47. Can the children read library books in the following locations? [READ OUT OPTIONS AND CHECK ALL THAT APPLY]

		Yes	No
In the school library	<input type="radio"/>	<input type="radio"/>	
In the classroom	<input type="radio"/>	<input type="radio"/>	
At home	<input type="radio"/>	<input type="radio"/>	
In other school locations	<input type="radio"/>	<input type="radio"/>	

48. How many Grade 1 and Grade 2 classrooms does this school have? (Refers to physical space, defining classroom as a space divided by walls on all sides and a door).

Grade 1: _____ Grade 2: _____ Grade 3: _____

49. Do any classes or grades share a classroom?

Yes ☐ No ☐ [➡ to Q.51]

50. If **yes**, please explain: _____

51. Do you have communal or classroom toilets? [CHECK ALL THAT APPLY]

Communal toilets ☐ [If unchecked, ➡ to Q.53]
Classroom toilets ☐
Other: _____

52. Are your communal toilets separate for boys and girls?

Yes ☐ No ☐ Other(s) _____

53. Does this school have electricity?

Yes ☐ No ☐ [➡ to Q.55]

54. If **yes**, what type of electricity? [CHECK ALL THAT APPLY]

☐ Grid supply ☐ Generator ☐ Solar power

55. How often does this school have electricity?

☐ Reliable ☐ Usually ☐ Rarely

56. Does this school have water supply?

Yes ☐ No ☐ [➡ to Q.58]

57. If **yes**, what type of water supply does this school have? [CHECK ALL THAT APPLY]

☐ Local Piped Water ☐ Well/Deep Well

☐ Rainwater Catchment ☐ Natural Source

58. Is there a school feeding program?

Yes ☐ No ☐ [➡ to Q.61]

59. If **yes**, is the feeding program offered every day?
Yes ☐ No ☐ [➡ to Q.61]

60. What time of day does the feeding program occur?
Before school ☐ Middle of the day ☐ After school ☐

61. Does this school have one or more computers?
Yes ☐ No ☐ [➡ to Q.64]

62. If **yes**, how many computers? _____

63. Who can use the computer(s)?
☐Principal ☐Teachers ☐Students

64. Does this school have internet?
Yes ☐ No ☐ [➡ to Q.66]

65. If **yes**, who can use the internet?
☐Principal ☐Teachers ☐Students

66. Building materials:

	Steel	Concrete	Wood	Nipa
Flooring				
Roofing				
Walls				

Building condition:

	Excellent	Good	Fair	Poor
Flooring				
Roofing				
Walls				

Community Involvement in the School

67. Is there a Parent Teachers Association (PTA) at this school?
Yes ☐ No ☐ [➡ to Q.73] Don't know ☐ [➡ to Q.73]

68. If **yes**, how many times did the PTA meet in this past school year?
Number of Days

69. On average, what percent of the pupils' parents and guardians did you meet with during the school year?
About less than 25% of parents ☐
About 26% to 50% of parents ☐

- About 51% to 75% ☐
- About 76% to 100% ☐
- Don't know/remember ☐

70. What are the roles of the PTA at your school? [DO NOT READ OUT OPTIONS AND CHECK ALL THAT APPLY]

- Discuss school management problems ☐
- Discuss students' problems and solutions ☐
- Manage partnerships with organizations ☐
- Review progress of school improvement efforts ☐
- Approve school policy ☐
- Manage school infrastructure and equipment ☐
- Discuss school curriculum ☐
- Raise funds (for materials, construction, etc.) ☐
- Manage procurement or distribution of textbooks ☐
- Implement/build PTA infrastructure projects ☐
- Other (specify): _____ ☐
- Don't know ☐

71. How satisfied are you with the level of support the PTA provides to the school?

- Very Satisfied ☐
- Satisfied ☐
- Somewhat Satisfied ☐
- Not satisfied ☐
- Don't know ☐

72. How satisfied are you with parents' (PTA or non-PTA) involvement in their children's school work?

- Very Satisfied ☐
- Satisfied ☐
- Somewhat Satisfied ☐
- Not satisfied ☐
- Don't know ☐

73. What types of DepEd officials (roles) visited your school in the last school year (July 2013-March 2014)? [CHECK ALL THAT APPLY-CROSS CHECK WITH LOG BOOK]

- District Supervisors ☐
- Other Supervisors ☐
- Medical staff ☐
- Engineers ☐
- Other _____ ☐

74. What activities have DepEd officials undertaken during his or her visits? [DO NOT READ RESPONSES – CHECK ALL THAT APPLY]

- No visit ☐

- Check the school's financial records and lesson plans ☐
- Check the infrastructure (water, toilets, etc.) ☐
- Sit in the class and observe a class in session ☐
- Check recent student assessment tests and evaluation processes ☐
- Provide information on curriculum innovations ☐
- Provide information on professional development opportunities ☐
- Give advice on school health and sanitary practices ☐
- Give advice to principals ☐
- Other _____ ☐

75. Do teachers in your school participate in LAC (Learning Action Cells)?
 Yes ☐ No ☐ [➡ to Q.78] Don't know ☐ [➡ to Q.79]

76. If **yes**, what role do you play in convening the Learning Action Cell at your school?
 Lead Instructor ☐
 Overseer or Manager ☐
 Observer ☐
 Other(s): _____ ☐

77. If **yes**, how often do the teachers convene for the Learning Action Cell?
 Never ☐
 Once a year ☐
 Yes, 2-3 times a year ☐
 1-2 times every month ☐
 Once every week ☐
 2-3 times a week ☐
 Daily ☐
 Don't know ☐
 Others: _____ ☐

78. If **no**, why not? [DO NOT READ RESPONSES – CHECK ALL THAT APPLY]
 School does not have one ☐
 Teachers do not have time ☐
 Teachers do not like the notion of a LAC ☐
 Not enough teachers in school to engage in a LAC ☐
 Other(s) _____ ☐

79. Has your school ever undergone an Early Grade Reading Assessment (EGRA) test in the past?
☐ Yes ☐ No [➡ to Q.81] ☐ Don't know [➡ to Q.81]

80. If **yes**, when did your school undergo an Early Grade Reading Assessment (EGRA) in the past?
 Year _____ Month _____

81. Is this school receiving support from any organizations, programs, or businesses other than DepEd or Local Government?

☐ Yes ☐ No [➡ to Q.83] ☐ Don't know [➡ to Q.83]

82. If **yes**, who is providing support? _____

Now we would like to review your enrollment and attendance records.

Student Enrollment, Attendance and Dropout

83. Enrollment (observe in records):

	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
	M	F	M	M	M	M	M	F	M	F	M	F
Section 1												
Section 2												
Section 3												
Section 4												
Section 5												

84. How are Grade 1 students assigned to sections? *(Applies only if the school has more than one Grade 1 section)*

- ☐ Randomly assigned to a section
- ☐ Assigned to section based on ability/level
- ☐ Assigned to section based on some other criteria.

Specify: _____

85. How are Grade 2 students assigned to sections? *(Applies only if the school has more than one Grade 1 section)*

- ☐ Randomly assigned to a section
- ☐ Assigned to section based on ability/level
- ☐ Assigned to section based on some other criteria.

Specify: _____

86. How are Grade 3 students assigned to sections? *(Applies only if the school has more than one Grade 1 section)*

- ☐ Randomly assigned to a section
- ☐ Assigned to section based on ability/level
- ☐ Assigned to section based on some other criteria.

Specify: _____

87. If we would like to hear more from you or if a follow up is required, could we contact you again in the near future?

Yes ☐ No ☐ [➡ to Q.89]

88. If **yes**, contact number: _____

89. Was there a class / section excluded in the sampling for Grade 1? [DO NOT ASK PRINCIPAL. JUST ANSWER BASED ON HOW SAMPLING WAS DONE EARLIER IN THE DAY, CONSULT TEAM LEADER IF DON'T KNOW ANSWER.]

Yes ☐ No ☐ [➡ to Q.92]

90. If **yes**, how many? _____

91. If **yes**, why? _____

92. Was there a class / section excluded in the sampling for Grade 2? [DO NOT ASK PRINCIPAL. JUST ANSWER BASED ON HOW SAMPLING WAS DONE EARLIER IN THE DAY, CONSULT TEAM LEADER IF DON'T KNOW ANSWER.]

Yes ☐ No ☐ [➡ to Q.95]

93. If **yes**, how many? _____

94. If **yes**, why? _____

95. Was there a class / section excluded in the sampling for Grade 3? [DO NOT ASK PRINCIPAL. JUST ANSWER BASED ON HOW SAMPLING WAS DONE EARLIER IN THE DAY, CONSULT TEAM LEADER IF DON'T KNOW ANSWER.]

Yes ☐ No ☐ [➡ to end]

96. If **yes**, how many? _____

97. If **yes**, why? _____

Thank you very much!

Time Interview ended: _____

Move on to student sampling.



Basa Pilipinas Household Survey

The following information should be pre-coded into the survey, with as much information as possible auto-populating (only 1-6 must appear to the enumerator; 7-13 can be hidden, if preferred):

1. Division: _____
2. District: _____
3. Barangay: _____
4. Name of Student: _____
5. Grade of Student: _____
6. Student ID number: _____
7. School ID Number: _____
8. Enumerator ID: _____
9. Household ID: _____
10. Date: _____
11. Time Start: _____
12. Time End: _____
13. GPS Coordinates: _____

Section A. Approaching the Household

Hi, <smile and greet the respondent>. My name is _____, and I am from TNS, an independent data collection firm working with USAID and the Department of Education (DepEd) in the Philippines. We are conducting a study to assess the impact a project that supports teachers and schools in their efforts to teach children using the language spoken at home. The first part of our study involved testing student reading abilities at randomly selected schools in or near areas where the new education project is being implemented. [STUDENT'S NAME] was randomly selected to take part in this study. We visited his/her school recently to assess his/her reading ability. But, now we want to understand more about the various factors that may be affecting [STUDENT'S NAME]'s ability to read.

We would like to speak with the person who would be most knowledgeable about [STUDENT'S NAME]'s schooling.

14. Is the most knowledgeable person about [STUDENT'S NAME] schooling available?
- No - **(SCHEDULE A TIME TO RETURN TO THE HOUSEHOLD)**
 - Yes - **(SKIP TO SECTION B. CONSENT)**

15. Visits:

Visit 1 Date: _____ Time: _____
Result: _____

Visit 2 Date: _____ Time: _____
Result: _____

Visit 3 Date: _____ Time: _____
Result: _____

Final Visit Date: _____ Time: _____
Result: _____

Total Number of
Visits: _____

RESULT CODES

- Primary Caregiver Available
- Nobody at home or no one who is capable of responding.
- Respondent asked to postpone the visit.

- d. Respondent refused to participate.
- e. Dwelling vacant or location not a dwelling.
- f. Dwelling destroyed.
- g. Dwelling not found.

Section B. Consent of Respondent

Hi, *<smile and greet the respondent>*. My name is _____, and I am from TNS, an independent data collection firm working with USAID and the Department of Education (DepEd) in the Philippines. We are conducting a study to assess the impact of a project that supports teachers and schools in their efforts to teach children using the language spoken at home. The first part of our study involved testing student reading abilities at randomly selected schools in or near areas where the new education project is being implemented. [STUDENT'S NAME] was randomly selected to take part in this study as one of 4,320 students in the study. We visited his/her school recently to assess his/her reading ability. But, now we want to understand more about the various factors that may be affecting [STUDENT'S NAME]'s ability to read by visiting the households of each of these 4,320 students. We will ask you questions about the people who live in your household, your student's education, and your experiences with his/her school.

We would like your help in this. But you do not have to take part if you do not want to, and you are free to opt out of any questions you do not feel comfortable answering. You may also end your participation in the study at any time without consequence. If you decide to take part, your responses will be confidential. Your name will not be mentioned anywhere in the survey data or report, and it will not be reported to DepEd or USAID. There are no anticipated risks to you or your student for participating in this study. Although your participation will not benefit you personally, the results of our analysis will be used by DepEd to help identify additional support that is needed to help ensure that all children in the Philippines become good readers. However, your student's name will not be included in this or any report and will be kept confidential.

If you agree to help with this study, I will read you a consent statement and ask for your oral consent to participate in the interview. This interview will take approximately 30 minutes to complete. Do you have any questions? Do you provide your consent to begin?

CONSENT STATEMENT: I understand and agree to participate in this reading research study.

Please feel free to contact Yazmin Tolentino(63(2)5484577) or James Fremming from Social Impact (001-706-465-1884 ext. 208) should you have questions about the study.

I. Household Roster: Please list each of the members who live in your household – including all the infants, children, adults, and elderly. Please start with yourself.

	1	2	3	4	5	6	7	8	9	10	11	12 If yes to 11	13
	Name (given name and surname)	What is [NAME's] relationship to the head of household? SEE CODES	What is [NAME's] relationship to [STUDENT'S NAME]? SEE CODES	What is [NAME'S] sex? (Only ask if not obvious) 0: Male 1: Female	How old is [NAME]? GO TO NEXT PERSON ON ROSTER if person is under the age of 2	Did [NAME] attend school this year? (Only ask this question if the person is older than 2) 0-No (SKIP TO COLUMN 9) 1-Yes	What level of school did he or she attend this year? SEE CODES	Did he or she repeat this year? 0 – No 1 – Yes	If column 6 is coded with a “0”, ask what is the highest level of education completed by [NAME]? SEE CODES	If the answer in column 9 is coded as less than 1 AND column 6 is coded as “0” ask “why didn’t he/she attend school this year?” If column 9 is coded as 1-11 AND column 6 is coded as “0”, ask “why did he or she drop out of school?” SEE CODES	Can [NAME] read? 0 – No 1 – A little (e.g. can read signs but not books) 2 – Yes	If yes for Col. 11, then, ask: Can [NAME] read a one page letter in any language 0 – Not at all 1 –Yes, with some difficulty 2- Yes, fluently	Is [NAME] employed? 0-No, unemployed 1-No, retired 2-No, too young to work 3-Yes, employed 4-Yes, self-employed
A													
B													
C													
D													
E													
F													
G													
H													
I													
J													

A. CODES FOR (Q1.2) RELATIONSHIP TO HEAD
1=HEAD OF HOUSEHOLD
2=SPOUSE OF HEAD OF HOUSE
3=CHILD OF HEAD
4=GRANDCHILD OF HEAD OF HOUSE
5=NIECE/NEPHEW OF HEAD OF HOUSE
6=PARENT OF HEAD OF HOUSE
7=SIBLING OF HEAD OF HOUSE
8=UNCLE/AUNT-IN-LAW OF HEAD
9=SON/DAUGHTER-IN-LAW OF HEAD
10=BROTHER/SISTER-IN-LAW OF HEAD
11=GRANDFATHER/GRD.MOTHER OF HEAD
12=AUNT/UNCLE OF HEAD
13=STEPFATHER/STEPMOTHER OF HEAD
14=STEPBROTHER/STEPSISTER OF HEAD
15=OTHER RELATIVE
16=NON-RELATIVE

B. CODES FOR (Q1.3) RELATIONSHIP TO THE STUDENT
1=FATHER OF STUDENT
2=MOTHER OF STUDENT
3=SIBLING OF STUDENT
4=GRANDFATHER OR GRANDMOTHER OF STUDENT
5=COUSIN OF STUDENT
6=UNCLE OF STUDENT
7=AUNT OF STUDENT
8=SISTER-IN-LAW OF STUDENT
9=BROTHER-IN-LAW OF STUDENT
10=GREAT GRANDFATHER OR GREAT GRANDMOTHER
11=STEPFATHER/STEPMOTHER OF STUDENT
12=NIECE/NEPHEW OF STUDENT
13=FAMILY FRIEND
14=STUDENT
97=OTHER

C. CODES FOR LEVEL OF SCHOOL ATTENDED THIS YEAR and HIGHEST LEVEL OF EDUCATION COMPLETED (Questions 1.7 & 1.9)
0 = NONE
1 = KINDERGARTEN
2 = GRADE 1
3 = GRADE 2
4 = GRADE 3
5 = GRADE 4
6 = GRADE 5
7 = GRADE 6
8 = GRADE 7
9 = GRADE 8
10 = GRADE 9
11 = GRADE 10
12 =VOCATIONAL TRAINING
13 =UNIVERSITY OR HIGHER
-97 =OTHER

D. REASON PERSON DIDN'T ATTEND SCHOOL OR DROPPED OUT (Q1.10)
1 = LIMITED AVAILABILITY OF TEACHERS
2 = EMPLOYMENT/HELPING FAMILY WITH WORK
3 = TAKING CARE OF SIBLINGS OR OTHER RELATIVES
4 = FEES/COST/COULDN'T AFFORD
5 = DISTANCE (THE CLOSEST SCHOOL WAS TOO FAR AWAY)
6 = MARRIAGE
7 = POOR SCHOOL FACILITIES
8 = PREGNANCY
9 = SICKNESS
10 = CONCERN OVER VIOLENCE/BULLYING/TEASING
11 = NOT MOTIVATED/DIDN'T VALUE EDUCATION
12 = CURRICULUM TOO DIFFICULT OR NOT PERFORMING WELL
97 = OTHER

BACKGROUND ON HOUSEHOLD – I would like to ask you some general background questions about your household.

2. Which languages are spoken in your household? (*Select all that apply; multiple responses possible*)
 - a. Ilokano
 - b. Cebuano
 - c. Filipino
 - d. English
 - e. Other, please specify _____
 - f. Refuse to respond

3. Which is the primary (ie. extensively and most frequently used) language spoken in your home?
 - a. Ilokano
 - b. Cebuano
 - c. Filipino
 - d. English
 - e. Other, please specify _____
 - f. Refuse to respond

4. What language does [STUDENT'S NAME] most commonly use with his/her friends?
 - a. Ilokano
 - b. Cebuano
 - c. Filipino
 - d. English
 - e. Other, please specify _____
 - f. Refuse to respond

5. How long have you been living in your current barangay?
 - a. < 1 year
 - b. 1-2 years
 - c. 2-3 years
 - d. more than 3 years (**SKIP TO QUESTION 7**)
 - e. Don't know = 98
 - f. Refuse to respond = 99

6. Where did you live before? (*If the respondent does not know the zone, write down the other information and add the zone in later*)
 - a. Province: _____

 - b. _____
 - c. Barangay: _____

 - d. School name that [STUDENT'S NAME] attended previously, if relevant: _____

HOUSING CONDITION AND HOUSEHOLD ASSETS – Now, I would like to ask about some assets you may have at your house.

7. What type of construction materials are the house's walls made of? (*Observe, don't ask, if possible*)
 - a. Light (cogon, nipa, sawali, bamboo, anahaw)
 - b. Strong (iron, aluminum, tile. Concrete, brick, stone, wood, asbestos)
8. What type of construction materials is the house's roof made of? (*Observe, don't ask, if possible*)
 - a. Light (cogon, nipa, or anahaw), salvaged/makeshift materials, mixed but predominantly light materials or salvaged materials
 - b. Strong (galvanized iron, aluminum, tile, concrete, brick, stone, asbestos, mixed but predominantly strong materials)
9. What kind of toilet facility does the family use?
 - a. None, open pit, closed pit or other
 - b. Flush toilet (water sealed)
10. How many radios does the family own?
 - a. Zero
 - b. One
 - c. Two or more
11. How many television sets does the family own?
 - a. Zero
 - b. One
 - c. Two or more
12. Does the family own a gas stove or a gas range?
 - a. No
 - b. Yes
13. Does the family own a sala set?
 - a. No
 - b. Yes
14. Does the family own a motorcycle or scooter?
 - a. No
 - b. Yes
15. Is this household (or any member) a beneficiary of Pantawid Pamilyan Pilipino Program (4Ps) or a recipient of Conditional Cash Transfer?
 - a. No
 - b. Yes
16. Does this household have a refrigerator (note: must be functioning)?

- a. No
- b. Yes

STUDENT SCHOOLING – Now I would like to talk about [STUDENT'S NAME]'s schooling.

17. Did [STUDENT'S NAME] attend a kindergarten?

- a. Yes
- b. No
- c. Don't know
- d. Refuse to respond

18. If yes, what type of kindergarten?

- a. Play group
- b. Day Care
- c. Nursery
- d. Other, specify

19. If yes, How long did [STUDENT'S NAME] attend kindergarten?

- a. 4 months or less
- b. More than 4 months but less than a school year
- c. One school year
- d. Two school years
- e. Three or more school years
- f. Don't know
- g. Refuse to respond

20. What was the primary language spoken in [STUDENT'S NAME]'s kindergarten?

- a. Ilokano
- b. Cebuano
- c. Filipino
- d. English
- e. Other, please specify _____
- f. Refuse to respond

21. A: Do you know [STUDENT NAME'S] age when he/she first attended Grade 1?

- a. Yes
- b. Don't know
- c. Refuse to respond

21. B: How old was [STUDENT'S NAME] (in years)? _____

22. Has [STUDENT'S NAME'S] repeated a grade?

- a. No = 0 (**SKIP TO QUESTION 24**)
- b. Yes = 1

- c. Don't know (**SKIP TO QUESTION 2**)
- d. Refuse to respond

23. Which grade(s) was it/ were they and why?

Standard	1 - Repeated (No = 0, Yes = 1)	2 – Number of years repeated (including current year, if applicable)	3 – Reason for repeating (see codes below; multiple selections possible)
A – Kindergarten			
B - Grade 1			
C - Grade 2			

CODES

Too many absences = 1
 Poor quality teaching = 2
 Classroom was too crowded = 3
 No/not enough textbooks = 4
 Child isn't smart = 5
 Child didn't study/pay attention = 6
 I didn't know how to help him/her = 7
 I didn't have time to help him/her = 8
 He/she was too hungry to learn = 9
 Teacher didn't like him/her = 10
 Child didn't sit for the exam = 11
 Lack of money to send the child to school = 12
 Family crisis = 13
 Natural disaster = 14
 Family or child relocated or moved = 15
 Student did not master the material = 16
 Student did not learn to read = 17
 Student did not want to go to school = 18
 Don't know = 98
 Refuse to answer = 99

24. Did [STUDENT'S NAME] miss one or more days of school in the past four weeks?

- a. No (**SKIP TO QUESTION 26**)
- b. Yes
- c. Don't know (**SKIP TO QUESTION 26**)
- d. Refuse to respond (**SKIP TO QUESTION 26**)

25. Why did [STUDENT'S NAME] miss some school in the past four weeks? (*Select all that apply; multiple responses possible*)

- a. He/she needed to stay home to complete domestic chores such as helping to care for younger children or elderly or sick relatives, cooking, cleaning, fetching water or wood, etc.
- b. He/she needed to tend animals or work on the family farm or in the family business.
- c. He/she did not want to go to school.
- d. He/she was ill/sick.
- e. He/she needed to attend a funeral.
- f. He/she was too hungry to go to school.
- g. He/she did not have any clothes to wear or his/her clothes were dirty.
- h. He/she missed school for another reason, please specify:

-
- i. Don't know
 - j. Refuse to respond

26. What are the things you (or someone in your household) do or have done to help [STUDENT'S NAME] learn? *(Don't read the options but check all options the respondent offers; multiple responses possible)*

- a. Help with their homework
- b. Buy or borrow books and other reading materials for them to read
- c. Take them to the library
- d. Take them to a reading event
- e. Talk with their teacher or head teacher about the child's learning progress
- f. Participate in the PTA
- g. Participate in the School Committee
- h. Regularly read to the child *(can be in the past when the child was younger)*
- i. Encourage child to read
- j. Communicate to your child that you have high expectations for him/her
- k. Hire a private tutor

27. Does [STUDENT'S NAME] ever do homework outside of school?

- a. No **(SKIP TO QUESTION 30)**
- b. Yes
- c. Don't know **(SKIP TO QUESTION 30)**
- d. Refuse to respond **(SKIP TO QUESTION 30)**

28. About how many hours per week does [STUDENT'S NAME] spend doing homework outside of school? _____

29. Do you or anyone else in the ever help [STUDENT'S NAME] with his/her homework? If so, how often?

- a. No
- b. Yes, rarely
- c. Yes, sometimes
- d. Yes, frequently
- e. Don't know
- f. Refuse to respond

30. Are there any books or other reading materials that [STUDENT'S NAME] can read at home?
- No **(SKIP TO QUESTION 34)**
 - Yes
 - Don't know **(SKIP TO QUESTION 34)**
 - Refuse to respond **(SKIP TO QUESTION 34)**

31. If yes, how many books or other reading materials are available in your household?
- Between 1 - 10
 - Between 11- 20
 - Between 21-50
 - Between 51 - 100
 - More than 100

32. If yes, how does your family obtain the following reading materials?

	Buy	From Library/ School/ Community Center	Gift	From family/ friends	From Gov. / NGO	Other
Newspaper						
Magazines						
Books						

33. If yes, are any of these books in [MOTHER TONGUE]?
- No
 - Yes
 - Don't know
 - Refuse to respond
34. Has anyone in your household ever read to [STUDENT'S NAME]? *(Including family members who no longer live in the household)*
- No **(SKIP TO QUESTION 37)**
 - Yes
 - Don't know **(SKIP TO QUESTION 37)**
 - Refuse to respond **(SKIP TO QUESTION 37)**
35. How often does someone usually read to [STUDENT'S NAME]?
- Nobody reads to him/her anymore
 - Once a month
 - A few times a week
 - Once a week
 - More than once a week
 - Don't know
 - Refuse to respond

36. A: Do you know [STUDENT NAME'S] age when someone in this household began to read to him/her?

- a. _____ age
- b. Don't know
- c. Refuse to respond

36. B: How old was [STUDENT'S NAME] (in years)? _____

37. Does [STUDENT'S NAME] ever bring any books home from school?

- a. No
- b. Yes
- c. Don't know
- d. Refuse to respond

38. A: What is the highest level of education you would like [STUDENT'S NAME] to achieve?

- a. Grade School
- b. Vocational **[SKIP TO NUMBER 39]**
- c. University higher **[SKIP TO NUMBER 39]**

38. B: Please specify what Grade in Grade School: _____

39. A: What is the highest level of education you expect [STUDENT'S NAME] to achieve?

- a. Grade School
- b. Vocational
- c. University or higher

39. B: Please specify what Grade in Grade School: _____

COMMUNITY-SCHOOL INVOLVEMENT IN EDUCATION

40. Does [STUDENT'S NAME'S] school have a PTA or School Committee?

- a. No **(SKIP TO QUESTION 43)**
- b. Yes, a PTA **(PROCEED TO 41 BUT THEN SKIP TO QUESTION 43)**
- c. Yes, a School Committee **(SKIP TO QUESTION 42)**
- d. Yes, both
- e. Don't know **(SKIP TO QUESTION 43)**
- f. Refuse to respond **(SKIP TO QUESTION 43)**

41. Please describe the types of things the PTA at [STUDENT'S NAME's] school does?

(Read the response options to the respondent. Select all that apply; multiple responses possible)

- a. Monitors teacher absences
- b. Buys, or raises money to buy learning materials (other than books) for the school
- c. Buys books for the classrooms or raises money to buy books
- d. Reads to students
- e. Provides tutoring for students who are having difficulty learning to read

- f. Tries to motivate the community to get involved in supporting the school
- g. Raises money and/or encourages parents and/or community members to repair/maintain the school and/or build new classrooms or teacher housing
- h. Helps organize book fairs
- i. Hosts after-school book clubs
- j. Works with the school staff to find ways to improve the school and the teaching-learning process
- k. Helps set policy
- l. Other, please specify_____
- m. Don't know
- n. Refuse to respond

42. What types of things does the School Committee at (STUDENT'S NAME) do? *(Let them respond on their own for about 20-30 seconds and then ask about the items below for those they haven't already given. Report all that apply; multiple responses possible)*

- a. Monitors teacher absences
- b. Buys, or raises money to buy learning materials (other than books) for the school
- c. Buys books for the classrooms or raises money to buy books
- d. Reads to students
- e. Provides tutoring for students who are having difficulty learning to read
- f. Tries to motivate the community to get involved in supporting the school
- g. Raises money and/or encourages parents and/or community members to repair/maintain the school and/or build new classrooms or teacher housing
- h. Helps organize book fairs
- i. Hosts after-school book clubs
- j. Works with the school staff to find ways to improve the school and the teaching-learning process
- k. Helps set policy
- l. Other, please specify_____
- m. Don't know
- n. Refuse to respond

43. Do you or others in the household feel welcome in (STUDENT'S NAME) school?

- a. No
- b. Yes **(SKIP TO QUESTION 45)**
- c. I/We have never gone to his/her school **(SKIP TO QUESTION 45)**
- d. Don't know **(SKIP TO QUESTION 45)**
- e. Refuse to answer **(SKIP TO QUESTION 45)**

44. Why do you or they not feel welcome in (STUDENT'S NAME) school? (*Don't read options, but record all options they give; multiple responses possible*)
- a. Because I/we can't read
 - b. Because I/we don't know anything about schools – or I never went to school
 - c. Because the teachers and head teachers at the school don't want me/us there
 - d. Because education is best left to the educators
 - e. Because I don't have time
 - f. I can't think of any way I can be helpful or make a difference
 - g. I'd be involved if someone told me how I could be helpful
 - h. Other, please
list _____
 - i. Don't know
 - j. Refuse to respond
45. Have you and/or any member of your family ever been invited to or asked to be involved in [STUDENT'S NAME'S] school in any way?
- a. No (**SKIP TO QUESTION 47**)
 - b. Yes
 - c. Don't know (**SKIP TO QUESTION 47**)
 - d. Refuse to respond (**SKIP TO QUESTION 47**)
46. Who invited you/them to be involved? (*Multiple responses possible; select all that apply*)
- a. Headteacher
 - b. Teacher
 - c. PTA Member
 - d. School Committee Member
 - e. Letter from school
 - f. Neighbor
 - g. Friend
 - h. Relative
 - i. [STUDENT's NAME]
 - j. The EGRA Project
 - k. The TIANA Project
 - l. The Literacy Boost Project
 - m. The ASPIRE Project
 - n. Other, please
list _____
 - o. Don't know or don't remember
 - p. Refuse to respond
47. Are you (and/or any member of the household) involved in the school in any way?
- a. No (**SKIP TO END**)

- b. Yes
- c. Don't know (**SKIP TO END**)
- d. Refuse to respond (**SKIP TO END**)

48. How are you (and/or someone in your household) involved? (*Multiple responses possible; select all that apply*)

- a. Help in [STUDENT'S NAME's] classroom
- b. Participate in PTA
- c. Participate on School Committee
- d. In a group helping to increase support for reading
- e. Host after-school book club
- f. Donate books, magazines, and other reading materials
- g. Donate food for school meals
- h. Encourage families to send their girls to school or to let them stay in school
- i. Encourage families to send disabled child(ren) to school or to let them stay in school
- j. Provide financial support to families who can't afford to children to school
- k. Provide (buy and/or make) learning materials for use in the classroom
- l. Helped to construct, maintain and/or refurbish a building (e.g., classroom, teacher housing, latrine)
- m. Help in school garden
- n. Other, please specify_____
- o. Don't know = -98
- p. Refuse to respond = -99

49. Approximately how much time do you spend on these activities?

- a. Number of hours:_____
- b. Per:_____

50. Language of Interview:

- a. Ilokano
- b. Cebuano
- c. Filipino
- d. English
- e. Other, please specify_____

51. In case we need to get in touch with you, would it be possible to call you?

- a. Yes
- b. No
- c. Specify: _____

Thank you for your participation! You have been very helpful

ANNEX VIII- EGRA ASSESSMENT EQUATING

SI is using Early Grade Reading Assessments (EGRA) designed and tested by RTI in Cebuano, Ilokano, Filipino, and English, and Early Grade Math Assessments (EGMA) in mother tongue designed and tested by DepEd. When learning scores are compared across time from a panel of students to infer impacts, scores are obtained through different versions of EGRA tools used across data collection rounds. RTI provided SI with two equivalent versions of the mother tongue EGRA instruments and DepEd provided three equivalent versions of the EGMA instruments. SI developed alternate Filipino and English instruments, as these were not available from either RTI or DepEd. These alternate versions were developed following guidance from RTI to scramble items in the letters, familiar words, and unfamiliar words subtests, and swap in a similar oral reading passage and accompanying reading comprehension questions, which were constructed keeping sentence structure and length the same, only altering main nouns and verbs with nouns and verbs of equal syntactic and lexical complexity. A third version of English was introduced at follow-up, following the same procedure.

DECISION TO EQUATE

The two test versions for each instrument were compared during pilot testing to determine if students were scoring systematically higher on either version of any test. No systematic differences were found between the two test forms for any of the tests in the pilot sample. Rather than using a baseline version and an endline version as is done in many EGRA studies, we took an added precaution of randomizing both test versions at baseline. At follow-up, each student takes an alternate version that she/he did not receive previously. This method allows us to identify and correct for any effects resulting from differences in test difficulty or comparability.

Analysis of the full sample data confirms that the versions were successfully assigned at random, though some discrepancies in difficulty were in the EGRA and EGMA instruments. Table I displays equivalence data with the full sample at baseline, and shows that statistically significant differences are observed across each of the tools.

Table I: Baseline EGRA tool differences

EGRA Grade 1		Form A		Form B		t-test	
		Mean	Standard deviation	Mean	Standard deviation	p-value	Level of significance
Ilokano	Letters correct per minute	12.17	13.04	12.71	12.81	0.697	
	Familiar words correct per minute	12.32	13.76	13.64	15.49	0.398	
	Unfamiliar words correct per minute	8.93	12.78	11.44	14.84	0.087	*
	Oral reading words correct per minute	8.26	10.98	11.48	13.53	0.013	**
	Reading comprehension (pct correct)	7%	0.18	10%	0.19	0.096	*
Cebuano	Letters correct per minute	15.82	15.47	17.20	16.87	0.178	
	Familiar words correct per minute	11.15	12.88	11.22	13.25	0.930	
	Unfamiliar words correct per minute	9.13	10.55	8.44	10.13	0.293	
	Oral reading words correct per minute	11.65	13.97	14.06	14.68	0.008	***
	Reading comprehension (pct correct)	10%	0.19	16%	0.24	0.000	***
EGRA Grade 2		Form A		Form B		t-test	
		Mean	Standard deviation	Mean	Standard deviation	p-value	Level of significance
Filipino	Letters correct per minute	17.80	16.67	17.98	16.42	0.841	
	Familiar words correct per minute	31.23	23.49	32.22	21.93	0.428	

	Unfamiliar words correct per minute	18.94	14.47	18.38	13.44	0.459	
	Oral reading words correct per minute	34.92	23.83	27.12	26.38	0.000	***
	Reading comprehension (pct correct)	24%	0.23	20%	0.26	0.002	***
English	Letters correct per minute	19.97	18.38	22.97	18.31	0.003	***
	Familiar words correct per minute	25.74	25.52	26.19	26.28	0.753	
	Unfamiliar words correct per minute	14.19	14.51	14.27	15.76	0.925	
	Oral reading words correct per minute	33.42	28.80	37.57	32.02	0.013	**
	Reading comprehension (pct correct)	12%	0.22	10%	0.18	0.038	**
EGRA Grade 3		Form A		Form B		t-test	
		Mean	Standard deviation	Mean	Standard deviation	p-value	Level of significance
Filipino	Letters correct per minute	21.35	17.74	19.33	17.17	0.035	**
	Familiar words correct per minute	48.07	25.36	45.63	25.87	0.083	*
	Unfamiliar words correct per minute	28.34	15.64	25.89	15.62	0.004	***
	Oral reading words correct per minute	48.35	25.69	46.79	25.53	0.268	
	Reading comprehension (pct correct)	14%	0.15	16%	0.19	0.134	
English	Letters correct per minute	22.81	17.99	25.06	17.79	0.022	**
	Familiar words correct per minute	43.81	30.00	44.95	30.90	0.495	
	Unfamiliar words correct per minute	23.99	18.76	24.45	18.72	0.657	
	Oral reading words correct per minute	53.80	34.76	61.59	37.74	0.000	***
	Reading comprehension (pct correct)	23%	0.29	15%	0.22	0.000	***

Equating Method

SI will apply means equating to convert scores from multiple forms of a test to the same common measurement scale. The conversion process obtained through equating adjusts for any difficulty differences existing between forms so that a score on one form can be equated to its equivalent value on another form. As a result, equating makes it possible to estimate the score that a person taking one test form would have received had they taken a different test form. In other words, equating ensures that any differences in scores between students taking different test versions are due to student ability as opposed to differences in test difficulty. The most commonly equated EGRA measure has consistently been ORF (USAID, EdData).

SI that calibrated the tools for equivalence with means equating method and obtained the following conversion factors. These factors were then applied on baseline and midline student scores for analysis. These conversion factors are shown below.

Table 2: Equating conversion factors for EGRA subtests

EGRA Ilokano	Conversion factors used on baseline scores	Conversion factors used on midline scores
Letter Sounds	0.958	0.991
Familiar Word Reading	0.904	1.101
Unfamiliar Word Reading	0.781	1.085
Oral Reading Fluency	0.719	1.023
Reading Comprehension	0.671	1.265
EGRA Cebuano	Conversion factors used on baseline scores	Conversion factors used on midline scores
Letter Sounds	0.900	1.006
Familiar Word Reading	0.980	1.051
Unfamiliar Word Reading	1.037	1.080
Oral Reading Fluency	0.815	0.934
Reading Comprehension	0.619	0.773
EGRA Filipino Grade 2	Conversion factors used on baseline scores	Conversion factors used on midline scores
Letter Sounds	0.979	1.100
Familiar Word Reading	0.955	1.066
Unfamiliar Word Reading	1.023	1.130
Oral Reading Fluency	1.314	1.375
Reading Comprehension	1.203	1.010
EGRA Filipino Grade 3	Conversion factors used on baseline scores	Conversion factors used on midline scores
Letter Sounds	1.099	0.958

Familiar Word Reading	1.047	0.980
Unfamiliar Word Reading	1.091	1.006
Oral Reading Fluency	1.042	0.959
Reading Comprehension	0.912	0.865

EGRA English (Version B)	Conversion factors used on baseline scores	Conversion factors used on midline scores
Letter Sounds	0.887	0.956
Familiar Word Reading	0.991	0.983
Unfamiliar Word Reading	0.990	1.024
Oral Reading Fluency	0.869	0.876
Reading Comprehension	1.436	1.515

EGRA English (Version C)	Conversion factors used on baseline scores	Conversion factors used on midline scores
Letter Sounds	--	0.995
Familiar Word Reading	--	1.010
Unfamiliar Word Reading	--	1.044
Oral Reading Fluency	--	0.983
Reading Comprehension	--	1.631

ANNEX IX-COMPLETE REGRESSION TABLES

Predictors of Reading Outcomes:

Oral Reading Fluency

	Overall	MT	Filipino	English
Grade	6.630 (0)		2.053 (0.144)	6.448 (5.50e-05)
Age of student	0.00449 (0.994)	-0.439 (0.537)	0.248 (0.744)	0.112 (0.893)
Gender of student	8.449 (0)	6.663 (0)	11.21 (0)	13.31 (0)
Region VII	13.14 (0)	10.39 (1.32e-05)	21.09 (0)	8.296 (0.00165)
Household assets index	0.311 (0.202)	0.271 (0.403)	0.274 (0.447)	1.137 (0.00512)
Student attended Kindergarten	0.825 (0.626)	7.697 (0.0107)	0.333 (0.894)	-0.377 (0.900)
Student's age when first attended Kindergarten	-0.279 (0.741)	-0.652 (0.507)	0.612 (0.595)	-0.184 (0.884)
Student does homework	0.273 (0.289)	0.134 (0.652)	0.848 (0.0355)	0.524 (0.245)
Student receives homework help from a family member	-0.318 (0.647)	0.993 (0.342)	-1.294 (0.157)	-2.029 (0.0744)
Student has books at home	-0.0672 (0.936)	0.186 (0.892)	0.104 (0.933)	0.939 (0.515)
Student brings books home from school	2.008 (0.0851)	0.919 (0.444)	0.458 (0.803)	3.810 (0.119)
Highest level of education in the household	-0.522 (0.103)	1.060 (0.187)	-0.409 (0.345)	0.947 (0.382)
Student's age when someone began to read to him/her	-1.809 (7.30e-06)	-1.213 (0.0265)	-2.243 (8.84e-05)	-2.626 (3.64e-05)
School assets index	-0.128 (0.790)	-1.149 (0.0637)	0.0138 (0.984)	1.464 (0.0391)
Highest grade instructed at this school	2.239 (1.31e-09)	3.206 (1.48e-07)	1.631 (0.00736)	1.384 (0.00123)
Number of days school was closed this year	0.00485 (0.982)	0.568 (0.0302)	0.248 (0.393)	0.410 (0.261)
Total school enrollment at baseline	0.00117 (0.200)	0.00380 (0.00196)	0.00220 (0.0589)	0.00216 (0.0638)
Months of teaching experience	0.00425 (0.400)	0.0151 (0.0187)	0.0164 (0.0447)	0.00456 (0.524)
Teacher reports always using a lesson plan	1.958 (0.575)	2.941 (0.445)	-0.788 (0.908)	1.066 (0.834)
Students are put into small reading groups	-1.834 (0.220)	-1.465 (0.657)	-6.308 (0.0224)	-3.282 (0.188)
Teacher has post-graduate degree	1.091	0.672	0.461	-0.954

	(0.283)	(0.625)	(0.788)	(0.508)
Class size	-0.0721	0.0391	-0.159	-0.143
	(0.158)	(0.659)	(0.00975)	(0.0330)
General teacher behavior index	-2.837	-12.09	-0.692	-1.644
	(0.411)	(0.0129)	(0.896)	(0.725)
Reading-specific teacher practices index	3.617	0.435	5.693	5.019
	(0.0365)	(0.845)	(0.0390)	(0.0536)
Minutes of class time using MT	0.00407	-0.00201	0.00617	0.00489
	(0.307)	(0.657)	(0.350)	(0.416)
Minutes of class time using Filipino	-0.00258	-0.0118	-0.00134	0.00431
	(0.767)	(0.0326)	(0.954)	(0.785)
Minutes of class time using English	0.00237	0.0279	0.0196	0.0185
	(0.696)	(0.117)	(0.0387)	(0.157)
Numbers correct per minute	0.879	1.016	1.060	1.398
	(0)	(0)	(0)	(0)
Constant	-27.23	-24.64	-23.93	-31.94
	(0.000633)	(0.0332)	(0.0502)	(0.0117)
	8,250	2,745	5,499	5,497

Reading Comprehension

	Overall	MT	Filipino	English
Grade	-0.153		-0.224	0.0365
	(0)		(0)	(0.314)
Age of student	0.00662	0.00871	0.00127	0.0152
	(0.478)	(0.594)	(0.893)	(0.462)
Gender of student	0.111	0.138	0.0969	0.146
	(0)	(0)	(0)	(3.25e-07)
Region VII	0.0285	0.214	-0.0118	0.247
	(0.276)	(0.000798)	(0.633)	(9.24e-08)
Household assets index	0.00345	0.00738	0.000381	0.0382
	(0.410)	(0.334)	(0.934)	(4.04e-06)
Student attended Kindergarten	0.0406	0.0979	0.0188	0.0889
	(0.167)	(0.0247)	(0.526)	(0.0525)
Student's age when first attended Kindergarten	0.00901	-0.00515	0.0105	0.0239
	(0.479)	(0.832)	(0.488)	(0.313)
Student does homework	0.00403	0.00557	0.00394	0.00836
	(0.337)	(0.444)	(0.413)	(0.330)
Student receives homework help from a family member	0.0101	0.0205	-0.00120	-0.0283
	(0.461)	(0.441)	(0.932)	(0.312)
Student has books at home	0.0501	0.0314	0.0503	0.0552
	(0.00426)	(0.330)	(0.00605)	(0.127)
Student brings books home from school	0.0143	-0.0161	0.0226	0.0889
	(0.564)	(0.601)	(0.413)	(0.102)
Highest level of education in the household	0.0126	0.0438	0.00513	0.0350

	(0.0252)	(0.0579)	(0.236)	(0.128)
Student's age when someone began to read to him/her	-0.0302 (5.38e-05)	-0.0412 (0.000487)	-0.0309 (0.000106)	-0.0860 (1.32e-10)
School assets index	-0.00443 (0.602)	-0.0264 (0.0613)	0.00454 (0.520)	0.0317 (0.00764)
Highest grade instructed at this school	0.0462 (6.84e-11)	0.0873 (4.46e-10)	0.0298 (5.77e-05)	0.0410 (0.000423)
Number of days school was closed this year	0.00469 (0.122)	0.00746 (0.303)	0.00303 (0.344)	0.00657 (0.303)
Total school enrollment at baseline	1.10e-05 (0.367)	1.56e-05 (0.479)	9.98e-06 (0.505)	1.83e-05 (0.478)
Months of teaching experience	0.000150 (0.0682)	0.000202 (0.217)	9.59e-05 (0.234)	-1.37e-05 (0.920)
Teacher reports always using a lesson plan	-0.00581 (0.903)	-0.0405 (0.610)	-0.0499 (0.473)	-0.105 (0.309)
Students are put into small reading groups	0.0243 (0.400)	0.0392 (0.446)	0.00691 (0.824)	-0.0389 (0.488)
Teacher has post-graduate degree	0.00515 (0.799)	0.0141 (0.610)	0.00667 (0.730)	-0.0604 (0.0389)
Class size	0.000377 (0.663)	-8.33e-05 (0.973)	-0.000112 (0.862)	-0.00192 (0.183)
General teacher behavior index	-0.0579 (0.243)	-0.348 (0.00113)	0.0146 (0.751)	-0.0346 (0.745)
Reading-specific teacher practices index	0.0399 (0.145)	0.0739 (0.133)	0.0427 (0.111)	0.0716 (0.214)
Minutes of class time using MT	1.83e-05 (0.775)	7.77e-05 (0.507)	-1.02e-05 (0.882)	-0.000203 (0.106)
Minutes of class time using Filipino	-0.000272 (0.0317)	-0.000291 (0.302)	-7.97e-05 (0.725)	0.000154 (0.574)
Minutes of class time using English	0.000165 (0.0312)	0.000140 (0.743)	-6.17e-05 (0.533)	0.000149 (0.375)
Numbers correct per minute	0.0117 (0)	0.0201 (0)	0.00935 (0)	0.0148 (0)
Constant	-0.390 (0.00144)	-0.817 (0.000330)	0.130 (0.387)	-1.018 (6.90e-05)
Observations (n)	8,250	2,748	5,502	5,502

Treatment Effects:

Regressions – Mother Tongue

	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, per minute	Reading comp., % correct	Reading comp. (no zeros), % correct
Interaction of Treatment (Basa) and Time	5.120*	1.505	0.195	3.662	0.0290	0.0271
	(0.0889)	(0.487)	(0.893)	(0.173)	(0.388)	(0.426)
Treatment (Basa) school	-0.826	3.970*	4.015**	1.309	0.0478	-0.00179
	(0.792)	(0.0896)	(0.0318)	(0.600)	(0.311)	(0.968)
Time (Midline=1)	0.564	6.939	8.489***	6.275	0.288***	0.246***
	(0.894)	(0.114)	(0.00940)	(0.112)	(0.000244)	(0.00107)
Age of student	0.125	1.158	-0.0297	0.0135	0.0182	0.0372
	(0.876)	(0.206)	(0.972)	(0.989)	(0.389)	(0.173)
Gender of student	5.887***	10.29***	7.945***	9.133***	0.187***	0.130***
	(2.26e-07)	(0)	(8.98e-11)	(0)	(0)	(3.20e-07)
Region	6.469**	1.931	2.833	8.631***	0.171**	0.0846
	(0.0201)	(0.562)	(0.340)	(0.00339)	(0.0128)	(0.157)
Household assets index	0.492	1.546***	1.154**	1.063**	0.0235**	0.0153*
	(0.218)	(0.00656)	(0.0125)	(0.0275)	(0.0219)	(0.0916)
Student attended Kindergarten	7.272**	8.275**	8.340**	11.02**	0.165*	0.0769
	(0.0374)	(0.0318)	(0.0219)	(0.0195)	(0.0558)	(0.317)
Student's age when first attended Kindergarten	0.360	-0.153	0.396	0.163	0.0134	0.0206
	(0.777)	(0.916)	(0.781)	(0.914)	(0.684)	(0.503)
Student does homework	-0.0359	-0.0621	-0.308	-0.156	0.000485	-0.00180
	(0.924)	(0.880)	(0.400)	(0.688)	(0.956)	(0.819)

Student receives homework help from a family member	2.241*	-0.742	0.144	1.249	0.0343	0.0181
	(0.0774)	(0.641)	(0.920)	(0.376)	(0.297)	(0.549)
Student has books at home	1.328	1.783	2.341	1.078	0.0484	0.0393
	(0.482)	(0.442)	(0.250)	(0.587)	(0.242)	(0.301)
Student brings books home from school	2.567	2.285	3.064	2.156	0.0102	-0.0246
	(0.160)	(0.334)	(0.146)	(0.324)	(0.853)	(0.638)
Highest level of education in the household	1.888	2.944*	1.911	3.110**	0.0890***	0.0804**
	(0.120)	(0.0715)	(0.159)	(0.0201)	(0.00786)	(0.0107)
Student's age when someone began to read to him/her	-2.386***	-2.181**	-2.999***	-2.994***	-0.0722***	-0.0563***
	(0.00972)	(0.0329)	(0.000593)	(0.000509)	(8.14e-05)	(0.000449)
School assets index	0.292	0.0388	-0.246	-0.213	0.00295	0.000693
	(0.781)	(0.972)	(0.795)	(0.831)	(0.897)	(0.968)
Highest grade instructed at this school	0.122	1.050	0.483	1.376	-0.00275	-0.00126
	(0.933)	(0.578)	(0.728)	(0.323)	(0.930)	(0.967)
Number of days school was closed this year	0.127	0.566	0.517	0.593	0.00579	0.00156
	(0.764)	(0.220)	(0.261)	(0.137)	(0.568)	(0.868)
Total school enrollment at baseline	-0.00110	0.00200	0.00302*	0.00505***	3.97e-05	9.87e-06
	(0.623)	(0.278)	(0.0648)	(0.00859)	(0.270)	(0.750)
Months of teaching experience	0.00939	0.0186	0.0222*	0.0204*	0.000328	0.000168
	(0.437)	(0.185)	(0.0836)	(0.0871)	(0.271)	(0.550)
Students are put into small reading groups	3.237	-1.739	0.0965	0.424	0.0723	0.0498
	(0.155)	(0.805)	(0.983)	(0.920)	(0.334)	(0.422)
Teacher has post-graduate degree	0.256	-1.630	-1.230	-0.502	-0.00142	-0.0122
	(0.921)	(0.419)	(0.519)	(0.804)	(0.973)	(0.744)
Class Size	0.0285	0.0894	0.0448	0.0157	-5.06e-05	-6.98e-05

	(0.813)	(0.562)	(0.735)	(0.904)	(0.987)	(0.978)
Teacher reports always using a lesson plan	3.354	1.254	-0.0636	0.659	-0.0565	-0.116
	(0.271)	(0.820)	(0.990)	(0.903)	(0.585)	(0.150)
Constant	-4.276	-18.36	-12.12	-17.78	-0.577*	-0.290
	(0.762)	(0.213)	(0.389)	(0.233)	(0.0634)	(0.342)
Observations (n)	2,753	2,753	2,750	2,751	2,756	2,027

Regressions – Filipino

	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct
Interaction of Treatment (Basa) and Time	-0.765	0.262	-0.157	0.742	0.0347	0.0351
	(0.519)	(0.744)	(0.809)	(0.632)	(0.120)	(0.178)
Treatment (Basa) school	4.347***	2.499	1.772	2.776	0.00637	-0.0106
	(0.00659)	(0.160)	(0.143)	(0.198)	(0.784)	(0.637)
Time (Midline=1)	8.034*	6.769*	3.847*	6.554	0.0530	0.0317
	(0.0521)	(0.0650)	(0.0960)	(0.206)	(0.335)	(0.535)
Grade of student	5.658***	16.99***	9.764***	14.99***	-0.112***	-0.129***
	(2.79e-07)	(0)	(0)	(0)	(3.02e-08)	(1.12e-10)
Age of student	-0.219	0.222	-0.374	0.688	0.00270	-0.00357
	(0.722)	(0.788)	(0.480)	(0.449)	(0.801)	(0.731)
Gender of student	6.234***	11.80***	7.113***	14.11***	0.123***	0.104***
	(0)	(0)	(0)	(0)	(0)	(0)
Region	10.82***	13.76***	9.126***	30.73***	0.0630**	0.0435*
	(1.02e-06)	(1.08e-07)	(1.01e-08)	(0)	(0.0242)	(0.0883)

Household assets index	0.821**	1.082**	0.799***	1.370***	0.00911*	0.00952**
	(0.0109)	(0.0137)	(0.00344)	(0.00500)	(0.0839)	(0.0388)
Student attended Kindergarten	3.763*	2.128	1.211	2.074	0.0406	0.0379
	(0.0941)	(0.514)	(0.564)	(0.551)	(0.292)	(0.253)
Student's age when first attended Kindergarten	0.588	0.0291	-0.224	0.318	0.0106	0.0125
	(0.568)	(0.984)	(0.813)	(0.843)	(0.565)	(0.435)
Student does homework	0.868**	1.066**	0.654**	1.473**	0.00822	0.00741
	(0.0274)	(0.0432)	(0.0480)	(0.0116)	(0.181)	(0.132)
Student receives homework help from a family member	-1.925*	-2.178	-1.220	-2.275*	-0.00932	-0.00742
	(0.0653)	(0.132)	(0.183)	(0.0999)	(0.590)	(0.629)
Student has books at home	1.332	0.331	0.227	-0.953	0.0442**	0.0344*
	(0.400)	(0.842)	(0.832)	(0.568)	(0.0313)	(0.0625)
Student brings books home from school	-1.066	2.984	2.586	1.530	0.0287	0.0201
	(0.584)	(0.342)	(0.186)	(0.607)	(0.415)	(0.515)
Highest level of education in the household	1.428***	1.602**	0.795*	1.079	0.0183**	0.0128
	(0.00178)	(0.0186)	(0.0771)	(0.182)	(0.0109)	(0.134)
Student's age when someone began to read to him/her	-2.800***	-3.918***	-2.525***	-4.437***	-0.0484***	-0.0327***
	(2.23e-06)	(9.61e-06)	(5.95e-07)	(1.32e-06)	(1.72e-07)	(8.62e-05)
School assets index	0.876	1.038	0.928*	1.150	0.0164*	0.0135
	(0.375)	(0.249)	(0.0949)	(0.266)	(0.0664)	(0.114)
Highest grade instructed at this school	-0.329	-0.311	0.0148	-0.692	0.000548	0.00691
	(0.861)	(0.858)	(0.989)	(0.775)	(0.983)	(0.754)
Number of days school was closed this year	0.189	0.515*	0.0871	0.530*	0.00542	0.00616*
	(0.548)	(0.0768)	(0.586)	(0.0879)	(0.136)	(0.0873)
Total school enrollment at baseline	0.000406	0.00194	0.00204**	0.00343*	2.14e-05	1.04e-05

	(0.786)	(0.187)	(0.0457)	(0.0629)	(0.260)	(0.477)
Months of teaching experience	-0.00255	0.0171**	0.0102*	0.0274**	0.000179*	0.000128
	(0.734)	(0.0410)	(0.0533)	(0.0135)	(0.0574)	(0.140)
Teacher reports always using a lesson plan	0.0845	4.905	0.565	-0.210	-0.0359	-0.0590
	(0.982)	(0.392)	(0.890)	(0.980)	(0.637)	(0.379)
Students are put into small reading groups	-0.0359	-4.909**	-3.213**	-9.292***	-0.00733	0.0281
	(0.984)	(0.0426)	(0.0301)	(0.00485)	(0.829)	(0.325)
Teacher has post-graduate degree	-0.776	-0.0994	0.230	0.576	0.0115	0.0191
	(0.596)	(0.958)	(0.845)	(0.803)	(0.578)	(0.292)
Class size	-0.162**	-0.236***	-0.123***	-0.296***	-0.00129	-0.000956
	(0.0301)	(0.000574)	(0.00275)	(0.000453)	(0.102)	(0.176)
Constant	4.965	-4.974	3.112	-2.979	0.336	0.392**
	(0.704)	(0.723)	(0.737)	(0.871)	(0.102)	(0.0294)
Observations (n)	5,496	5,501	5,500	5,499	5,502	4,760

Regressions – English

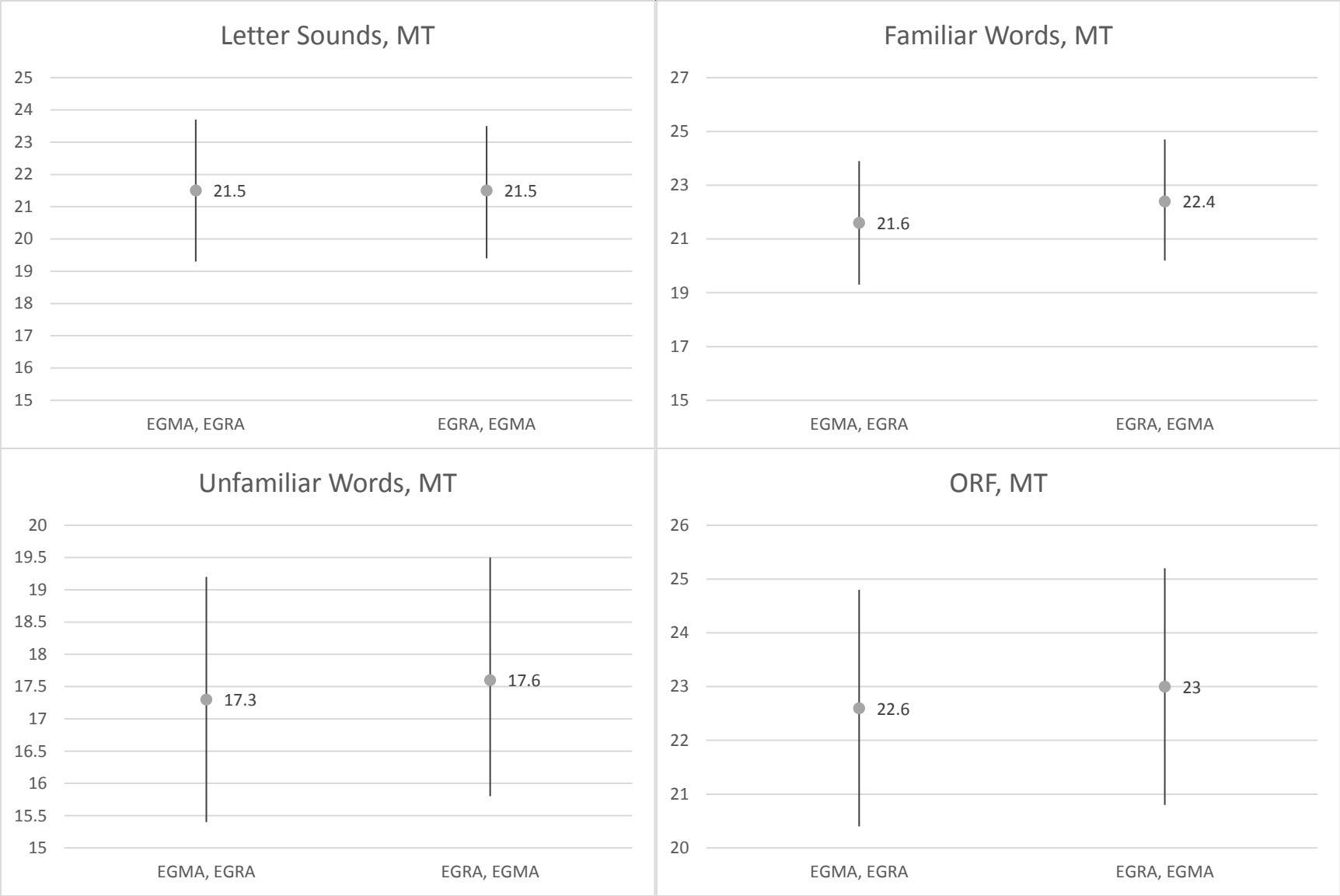
	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct
Interaction of Treatment (Basa) and Time	0.115	0.206	1.486	0.243	0.0593	0.0594
	(0.916)	(0.848)	(0.109)	(0.829)	(0.143)	(0.144)
Treatment (Basa) school	4.311***	1.631	0.771	1.391	0.0123	-0.00209
	(0.00275)	(0.503)	(0.619)	(0.564)	(0.768)	(0.960)
Time (Midline=1)	4.179	0.0306	1.107	0.435	-0.0774	-0.100
	(0.368)	(0.994)	(0.758)	(0.943)	(0.258)	(0.174)
Grade of student	4.416***	22.19***	12.82***	22.51***	0.203***	0.177***

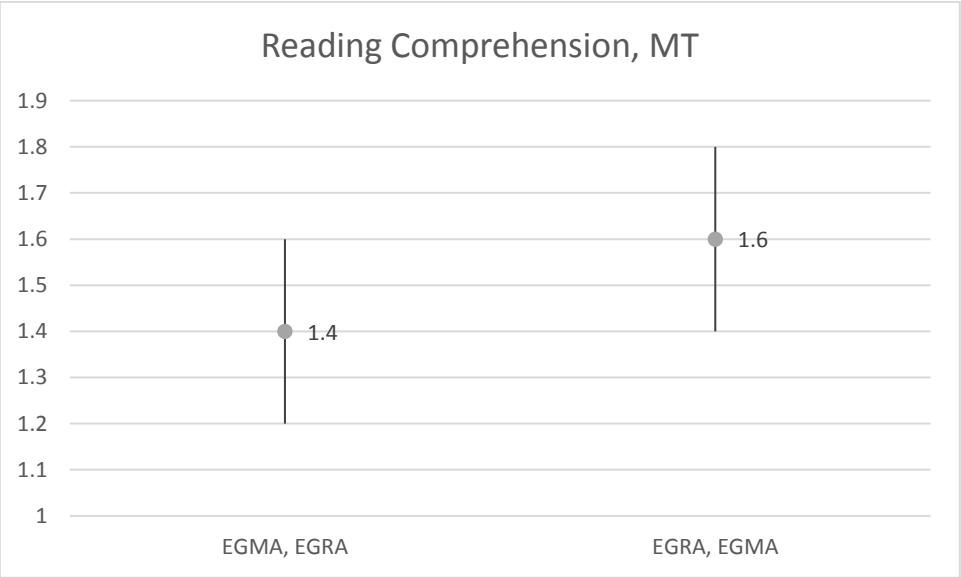
	(1.44e-05)	(0)	(0)	(0)	(1.09e-06)	(2.73e-05)
Age of student	-0.206	0.151	0.0557	0.746	0.0201	0.0165
	(0.711)	(0.903)	(0.938)	(0.507)	(0.396)	(0.494)
Gender of student	6.215***	14.89***	8.329***	17.15***	0.184***	0.160***
	(0)	(0)	(0)	(0)	(8.62e-10)	(6.78e-08)
Region	9.227***	18.70***	11.65***	18.84***	0.371***	0.346***
	(2.10e-05)	(2.42e-08)	(7.42e-08)	(1.12e-06)	(2.27e-10)	(6.89e-10)
Household assets index	0.888***	2.469***	1.379***	2.563***	0.0529***	0.0508***
	(0.00498)	(2.96e-05)	(0.000179)	(3.62e-05)	(1.81e-07)	(2.47e-07)
Student attended Kindergarten	2.537	4.220	1.900	1.865	0.112*	0.110*
	(0.184)	(0.279)	(0.465)	(0.677)	(0.0702)	(0.0710)
Student's age when first attended Kindergarten	0.587	-0.700	-1.223	-0.525	0.0238	0.0332
	(0.518)	(0.697)	(0.283)	(0.783)	(0.396)	(0.206)
Student does homework	0.786**	1.335**	0.878**	1.324*	0.0158	0.0129
	(0.0292)	(0.0415)	(0.0398)	(0.0631)	(0.133)	(0.221)
Student receives homework help from a family member	-1.824*	-2.348	-1.702	-3.336*	-0.0393	-0.0368
	(0.0723)	(0.183)	(0.134)	(0.0702)	(0.212)	(0.227)
Student has books at home	0.705	-0.953	-0.0893	-0.144	0.0440	0.0487
	(0.626)	(0.660)	(0.947)	(0.949)	(0.287)	(0.239)
Student brings books home from school	-0.601	5.681	2.766	5.019	0.0955	0.0751
	(0.752)	(0.138)	(0.252)	(0.219)	(0.172)	(0.260)
Highest level of education in the household	1.236**	2.246**	1.309**	2.857**	0.0542**	0.0482**
	(0.0183)	(0.0233)	(0.0296)	(0.0195)	(0.0170)	(0.0322)
Student's age when someone began to read to him/her	-2.124***	-5.087***	-3.154***	-5.599***	-0.116***	-0.103***
	(4.47e-05)	(5.61e-06)	(4.80e-07)	(9.72e-08)	(1.91e-10)	(7.35e-09)

School assets index	0.920	2.038*	1.165*	2.574**	0.0420***	0.0394***
	(0.370)	(0.0828)	(0.0993)	(0.0294)	(0.00505)	(0.00594)
Highest grade instructed at this school	1.456	4.416**	2.096	2.517	0.0655**	0.0729**
	(0.498)	(0.0199)	(0.222)	(0.388)	(0.0154)	(0.0155)
Number of days school was closed this year	0.213	0.506	0.398	0.808*	0.0114	0.00998
	(0.512)	(0.220)	(0.102)	(0.0835)	(0.146)	(0.205)
Total school enrollment at baseline	0.000223	0.00387**	0.00334***	0.00382*	3.31e-05	4.02e-05
	(0.819)	(0.0421)	(0.00676)	(0.0589)	(0.223)	(0.211)
Months of teaching experience	9.59e-05	0.0222**	0.0165**	0.0193*	0.000171	0.000147
	(0.989)	(0.0338)	(0.0152)	(0.0926)	(0.331)	(0.384)
Teacher reports always using a lesson plan	-0.660	2.225	-1.463	2.094	-0.0881	-0.0838
	(0.858)	(0.750)	(0.753)	(0.770)	(0.416)	(0.394)
Students are put into small reading groups	-1.863	-4.957	-4.273*	-7.315*	-0.0737	-0.0473
	(0.251)	(0.132)	(0.0514)	(0.0522)	(0.255)	(0.438)
Teacher has post-graduate degree	-1.240	0.478	0.496	-1.207	-0.0616*	-0.0615*
	(0.401)	(0.850)	(0.734)	(0.596)	(0.0942)	(0.0845)
Class size	-0.131*	-0.293***	-0.163***	-0.340***	-0.00412**	-0.00449**
	(0.0673)	(0.00177)	(0.00277)	(0.00148)	(0.0221)	(0.0103)
Constant	1.669	-42.41***	-14.65	-21.16	-1.037***	-0.999***
	(0.903)	(0.00795)	(0.216)	(0.296)	(5.43e-05)	(7.59e-05)
Observations (n)	5,496	5,498	5,497	5,497	5,502	4,979

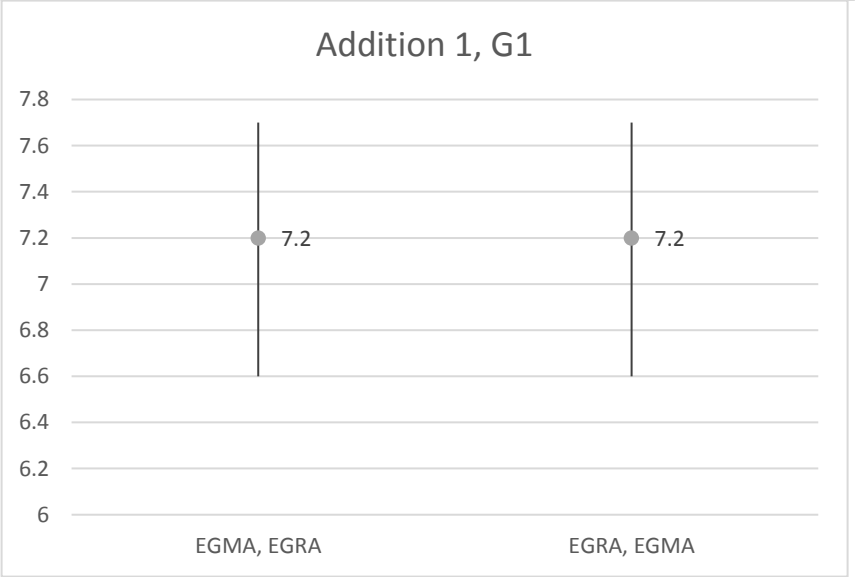
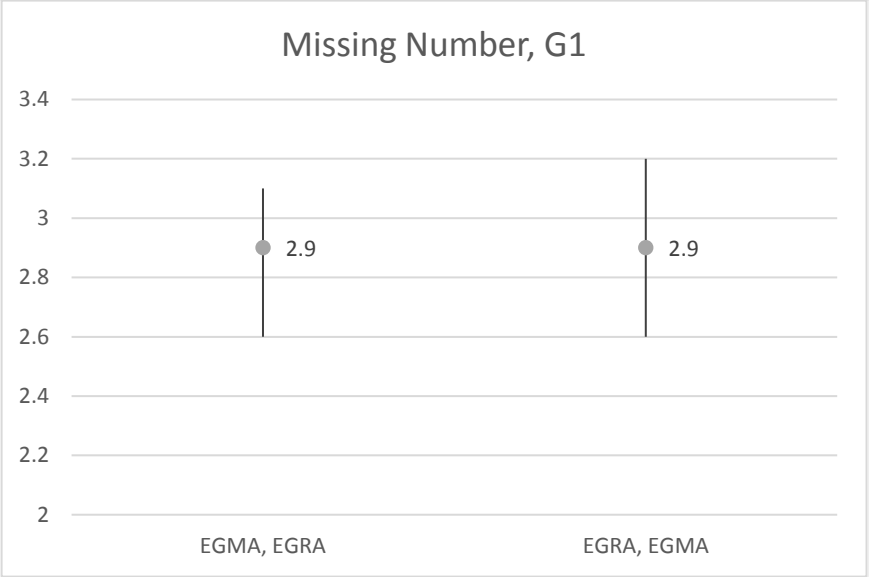
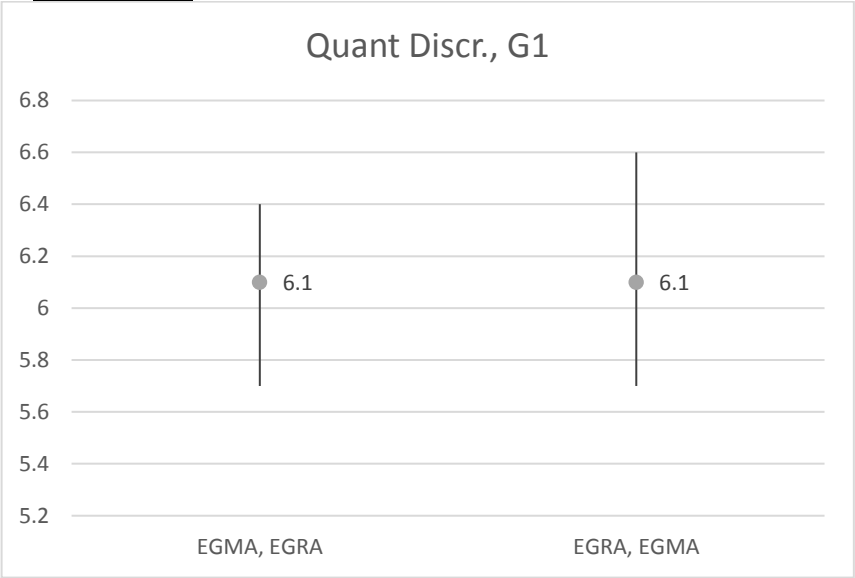
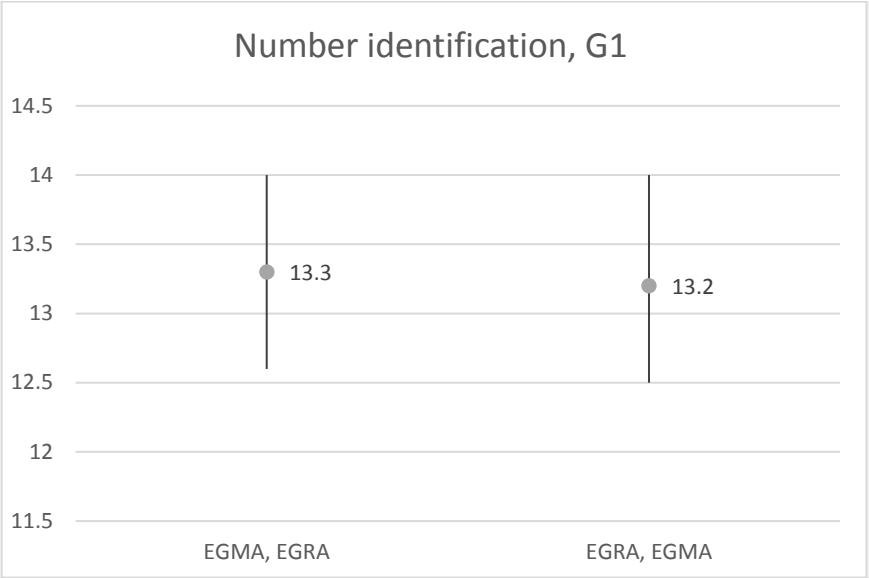
ANNEX X- REVIEW OF TEST ORDER EFFECTS

G1 EGRA:

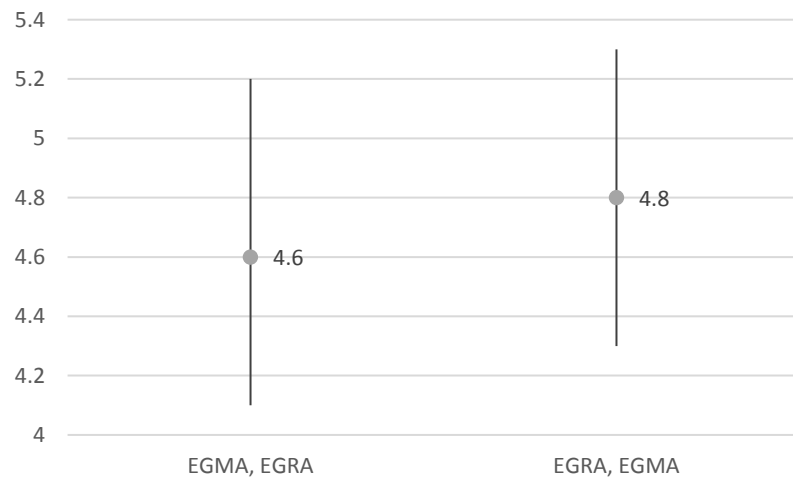




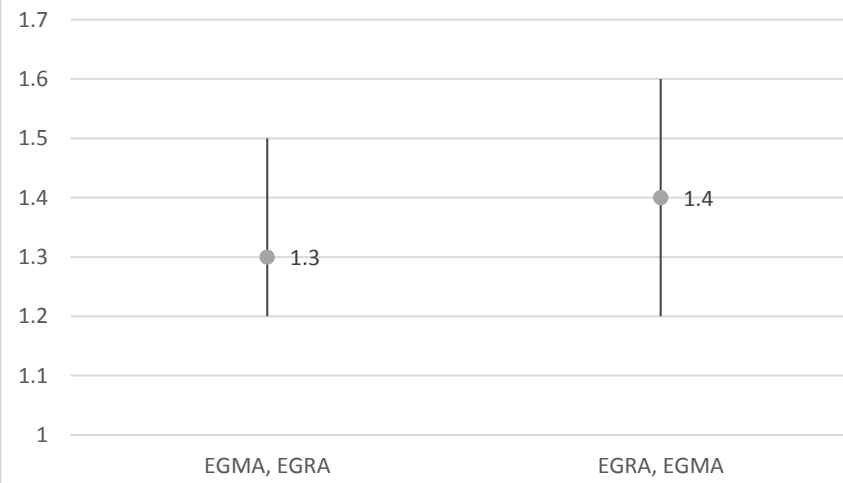
G1 EGMA:



Subtraction 1, G1

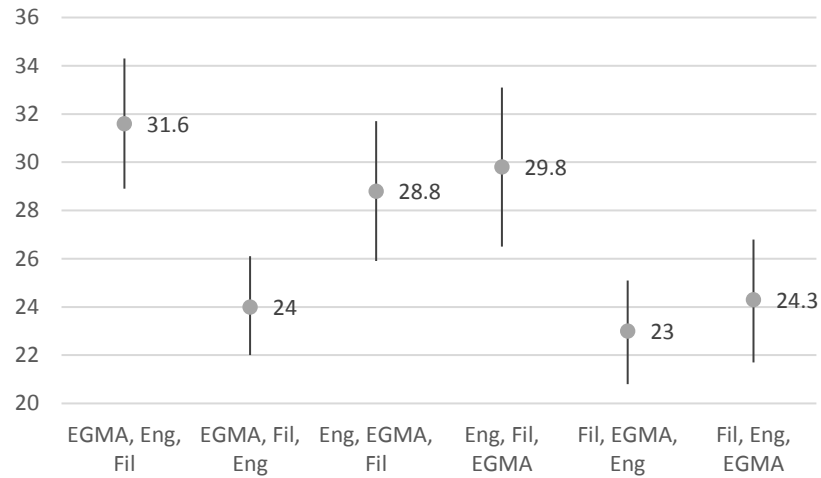


Word Problem, G1

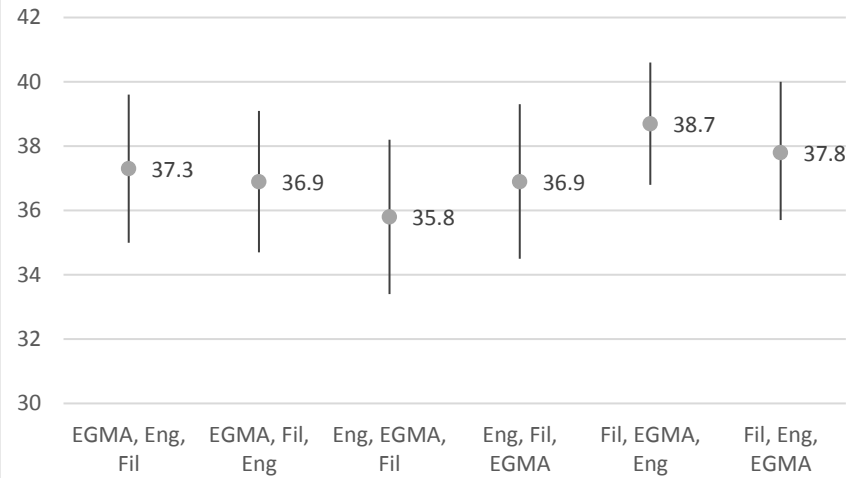


G2/G3 Filipino EGRA:

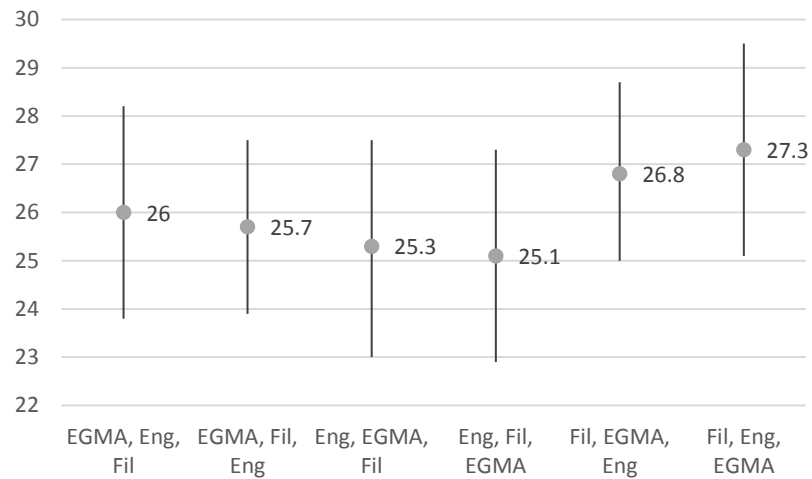
Letter Sounds, Filipino



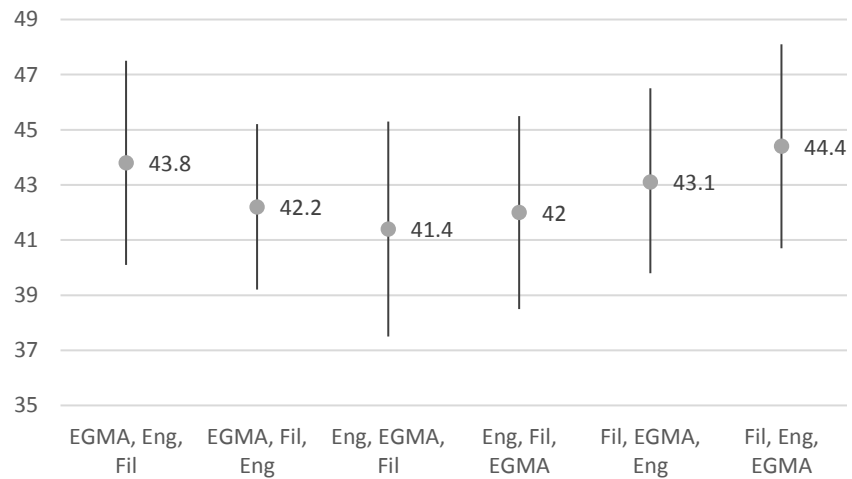
Familiar Words, Filipino



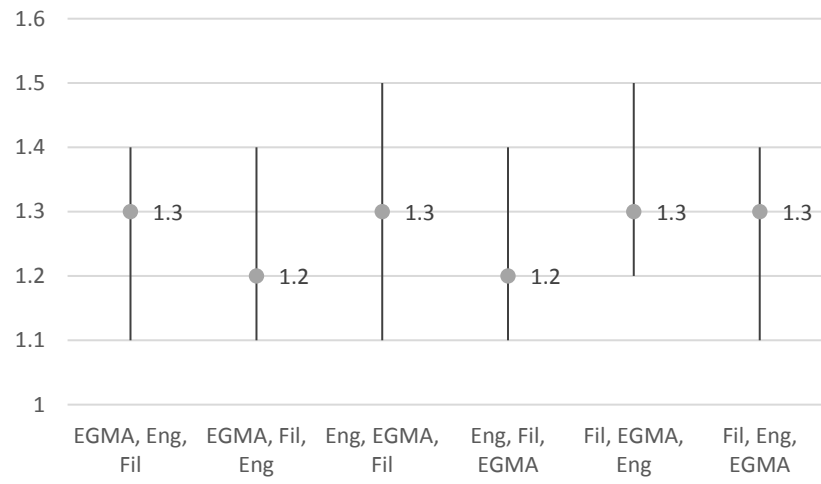
Unfamiliar Words, Filipino



ORF, Filipino

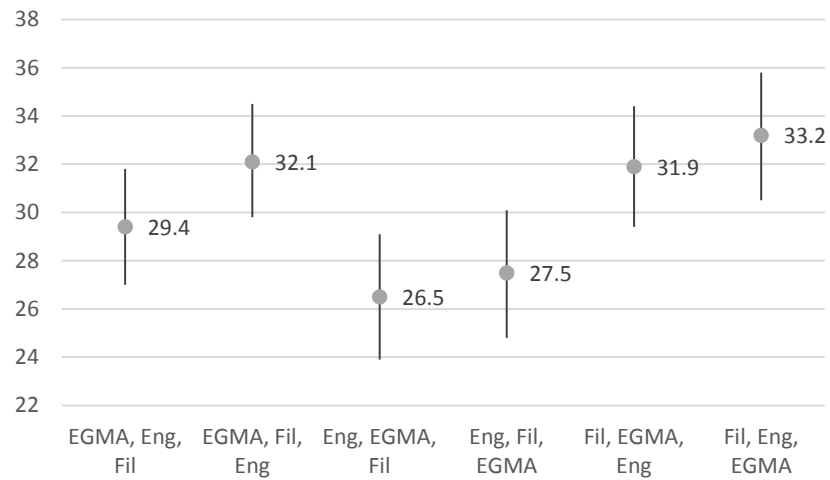


Reading Comprehension, Filipino

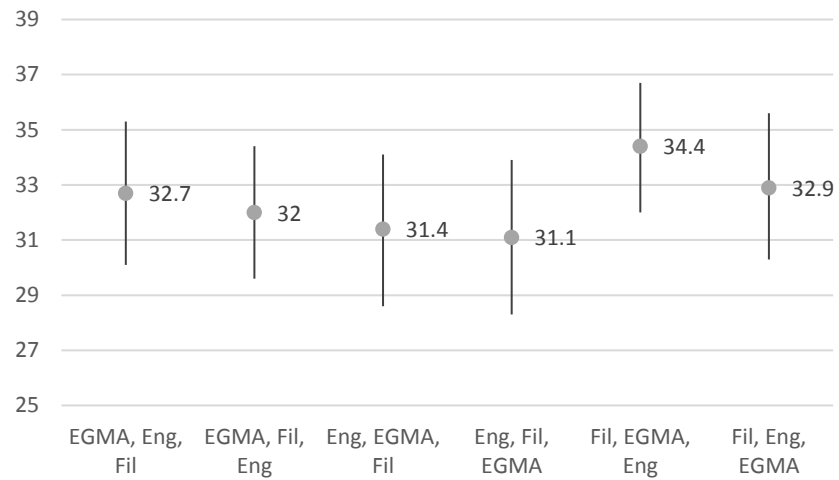


G2/G3 English EGRA:

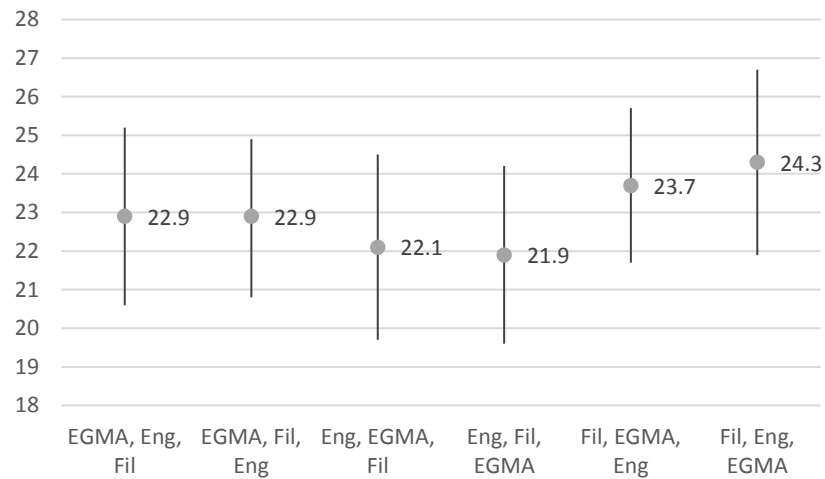
Letter Sounds, English



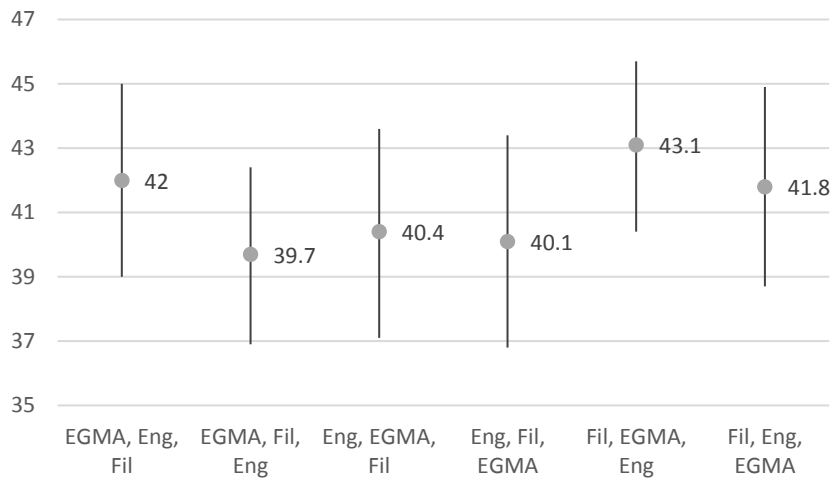
Familiar Words, English

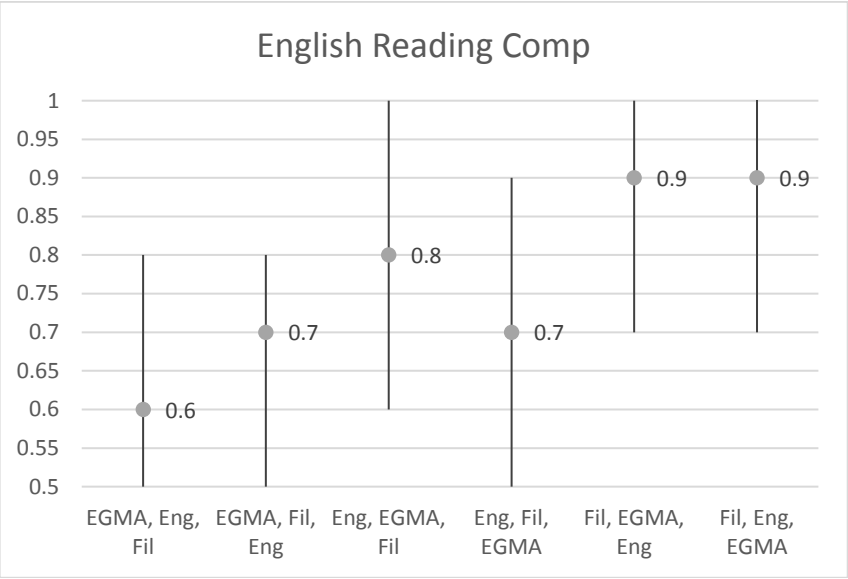


Unfamiliar Words, English



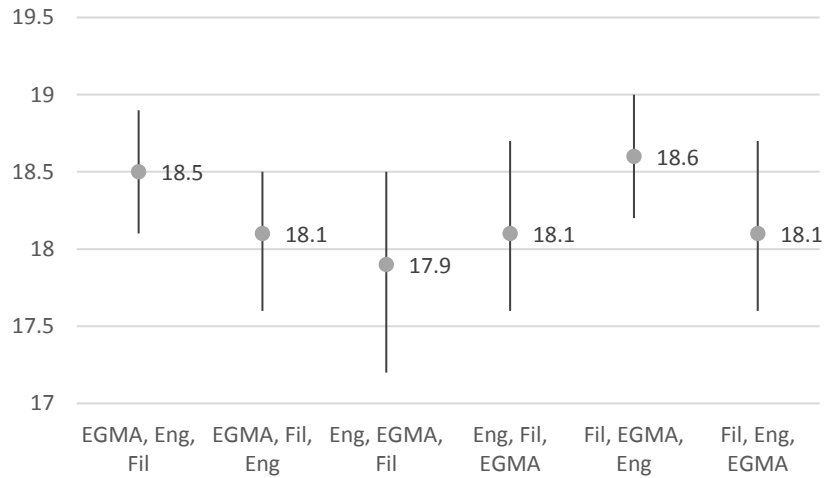
ORF, English



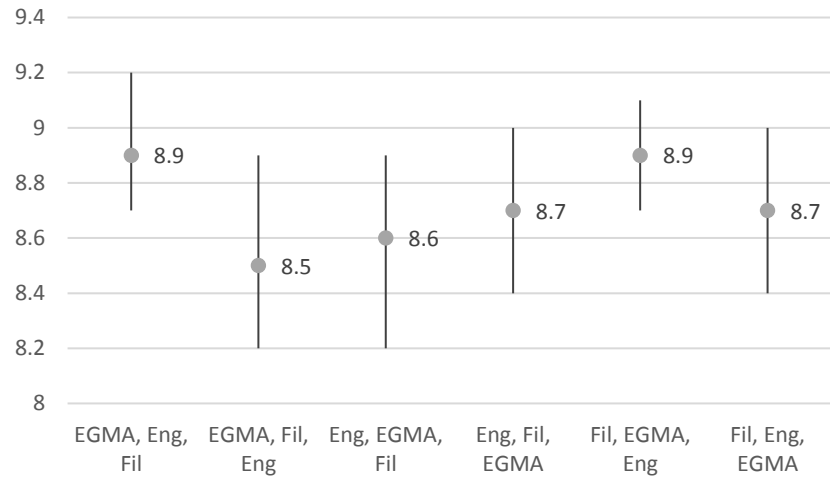


G2/G3 EGMA:

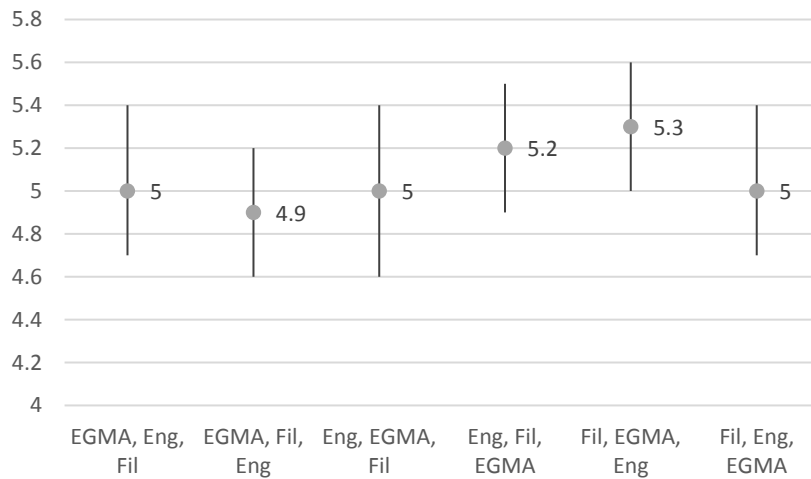
Number Identification, G2/G3



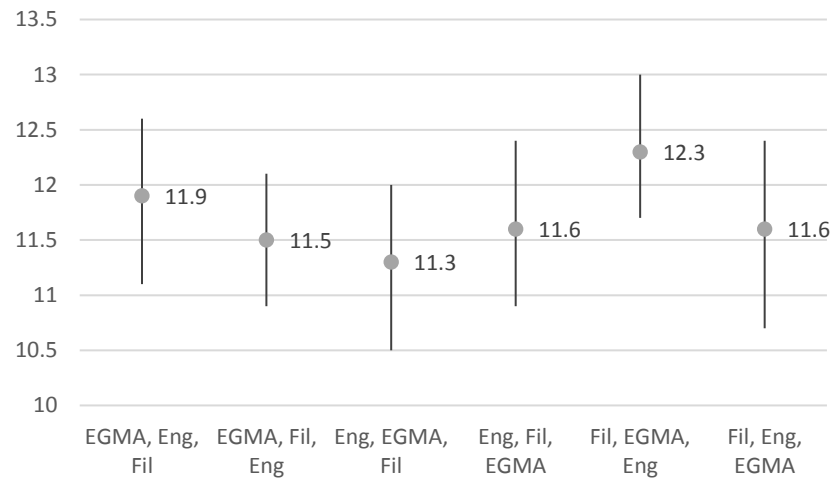
Quant Discr., G2/G3



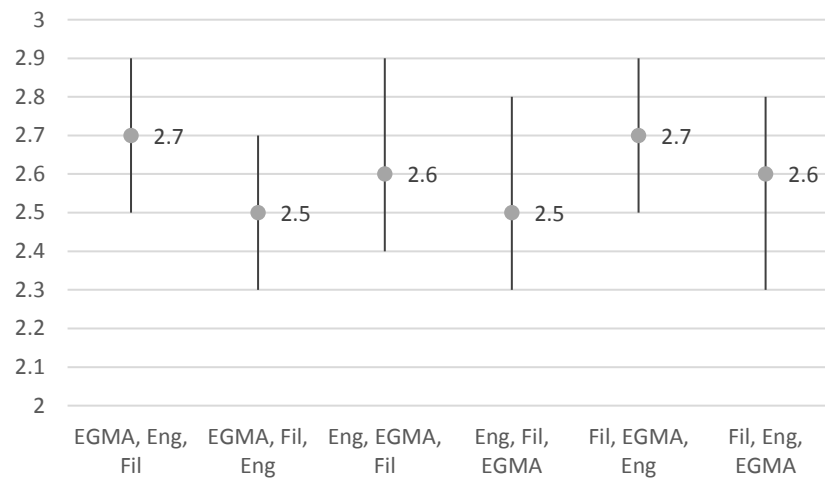
Missing number, G2/G3



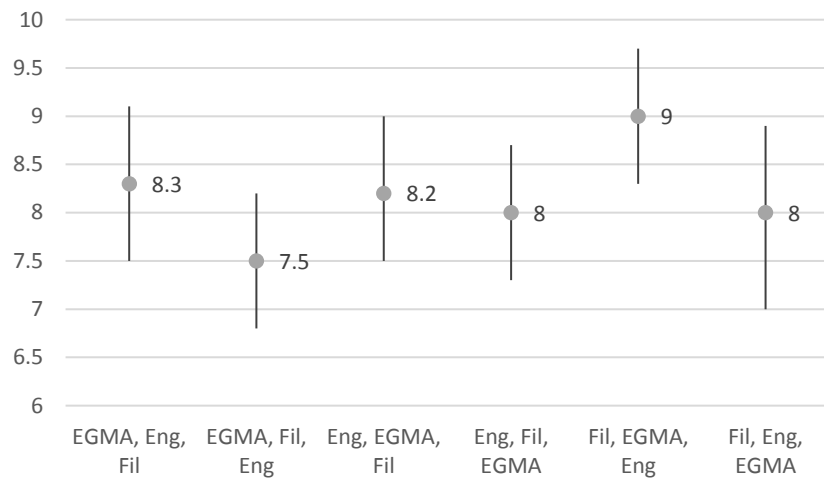
Addition 1, G2/G3



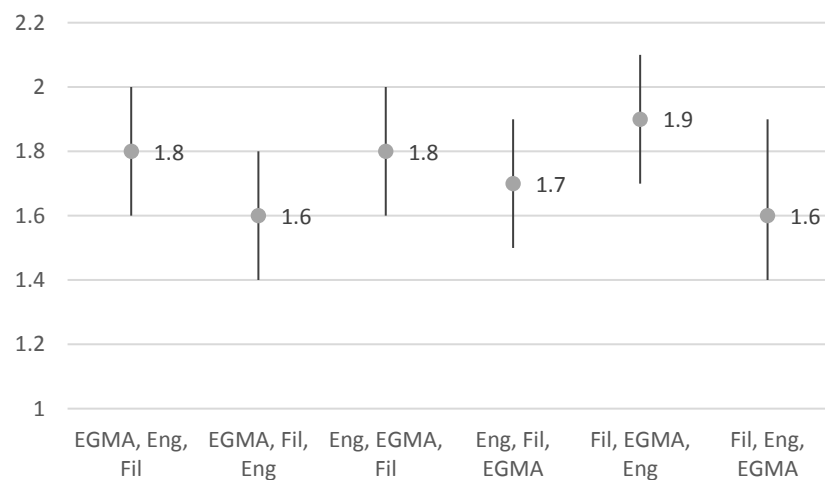
Addition 2, G2/G3



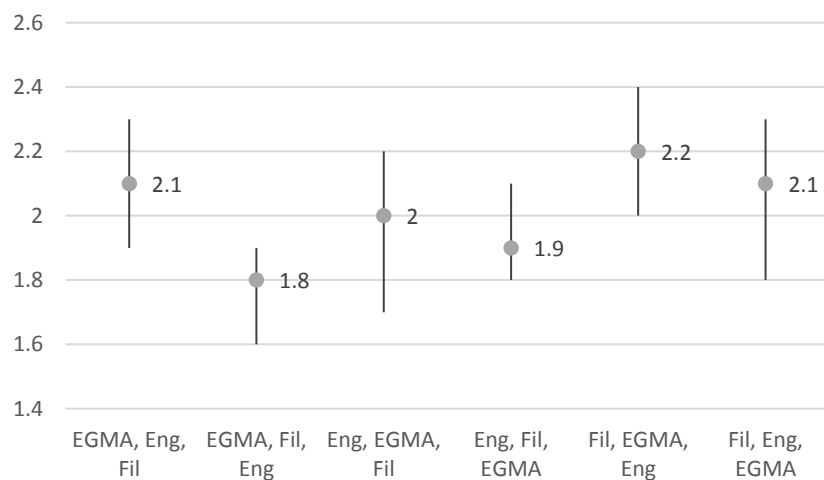
Subtraction 1, G2/G3



Subtraction 2, G2/G3



Word problem, G2/G3



ANNEX XI-EGRA ZERO SCORES

	MTBMLE		Basa	
G1 EGRA, Mother Tongue	BL	ML	BL	ML
Letter sounds, items correct per minute	15%	9%	17%	7%
Familiar words, items correct per minute	34%	22%	24%	14%
Unfamiliar words, items correct per minute	45%	29%	35%	22%
Oral reading fluency, items correct per minute	35%	22%	27%	16%
Reading comprehension	65%	42%	64%	39%
G2 EGRA, Filipino	BL	ML	BL	ML
Letter sounds, items correct per minute	20%	12%	20%	10%
Familiar words, items correct per minute	15%	11%	11%	8%
Unfamiliar words, items correct per minute	20%	15%	16%	12%
Oral reading fluency, items correct per minute	22%	18%	25%	18%
Reading comprehension	46%	33%	45%	31%
G2 EGRA, English	BL	ML	BL	ML
Letter sounds, items correct per minute	20%	11%	18%	6%
Familiar words, items correct per minute	23%	20%	21%	15%
Unfamiliar words, items correct per minute	28%	22%	27%	17%
Oral reading fluency, items correct per minute	17%	13%	13%	9%
Reading comprehension	64%	60%	65%	57%
G3 EGRA, Filipino	BL	ML	BL	ML
Letter sounds, items correct per minute	14%	7%	11%	5%
Familiar words, items correct per minute	6%	5%	4%	4%
Unfamiliar words, items correct per minute	9%	8%	7%	6%
Oral reading fluency, items correct per minute	5%	5%	4%	4%
Reading comprehension	46%	42%	40%	32%
G3 EGRA, English	BL	ML	BL	ML
Letter sounds, items correct per minute	12%	6%	12%	3%
Familiar words, items correct per minute	11%	8%	8%	6%
Unfamiliar words, items correct per minute	15%	11%	13%	10%
Oral reading fluency, items correct per minute	7%	5%	5%	5%
Reading comprehension	50%	47%	52%	45%

ANNEX XII-GRADE DISAGGREGATED TEACHER TABLES

Grade 1

Table 1: Teacher-level Outcomes, Grade 1

	MTBMLE		Basa	
	BL	ML	BL	ML
Early grade reading training, % of teachers attended	80%	70%	67%	69%
Early grade reading training, days attended	5.57	3.78	3.83	3.7
Class time in mother tongue, minutes	218.16	292.35	237.61	248.07
Class time in Filipino, minutes	38.78	42.43	45.79	41.32
Class time in English, minutes	31.61	40.09	31.57	37.7
Teachers displaying 75%+ of applicable general behaviors	88%	75%	82%	65%
Teachers displaying 75%+ of applicable reading behaviors	53%	27%	47%	24%
General Teaching Behavior Index	91%	86%	89%	81%
Reading Teaching Practices Index	73%	51%	69%	54%
Teachers at least somewhat familiar with MT grammar	85%	90%	99%	95%
Teachers not comfortable providing instruction in MT	8%	9%	0%	1%

*Denotes a statistically significant effect at a 90% confidence level or better.

Table 2: General Best-Practice Teaching Behaviors, Grade 1

Category	General "best practice" teaching behavior	MTBMLE		Basa	
		BL	ML	BL	ML
Classroom Materials	Uses different instructional resources	97%	99%	96%	96%
	Uses materials besides textbooks	86%	90%	87%	91%
Opportunities for Reflection	Connects to previous lessons	57%	88%	40%	82%
	Asks probing questions	93%	78%	91%	67%
	Provides opportunities to apply learning	96%	89%	92%	78%
	Provides opportunities for critical thinking	88%	74%	85%	55%
Positive Learning Environment	Effective classroom management	96%	100%	99%	100%
	Treats students fairly	100%	100%	100%	100%
Other	Manages time effectively	100%	100%	99%	100%
	Assesses pupil learning	100%	57%	100%	57%
	Cooperative learning strategies	85%	68%	84%	71%

Table 3: Reading-Specific Best-Practice Teaching Behaviors, Grade I

Category	Reading-Specific teaching behavior	MTBMLE		Basa	
		BL	ML	BL	ML
Opportunities for Developing Comprehension	Asks pre-reading questions	71%	51%	65%	57%
	Asks learners to act something out	65%	24%	53%	34%
	Uses multiple methods for comp.	86%	65%	87%	49%
	Asks questions to assess reading comp.	92%	86%	92%	94%
	Asks questions to assess listening comp.	86%	68%	87%	78%
	Allows learners to retell story	46%	32%	47%	28%
Opportunities for Learning to Decode and Spell Words	Encourages sounding it out	61%	49%	53%	48%
	Provides instructions to decode	60%	32%	53%	40%
	Asks learners to recognize letters	51%	28%	56%	31%
	Asks learners to recite alphabet	34%	12%	25%	19%
Positive Learning Environment	Avoids criticizing learners	95%	98%	100%	99%
	Encourages learners to help each other	85%	58%	75%	62%
Other	Uses reading-level appropriate activities	79%	63%	83%	67%
	Asks readers to read aloud	73%	44%	71%	57%
	Teaches learners new words	78%	63%	67%	64%
	Assigns individual reading	64%	32%	48%	30%
	Provides methods for good writing skills	83%	31%	79%	35%

Grade 2

Table 4: Teacher-level Outcomes, Grade 2

	MTBMLE		Basa	
	BL	ML	BL	ML
Early grade reading training, % of teachers attended	60%	68%	70%	72%
Early grade reading training, days attended	4.05	3.97	3.53	3.76
Class time in mother tongue, minutes	220.60	284.20	221.99	243.36
Class time in Filipino, minutes	49.88	55.74	49.06	47.62
Class time in English, minutes	48.04	59.65	69.05	56.74
Teachers displaying 75%+ of applicable general behaviors	83%	71%	85%	66%
Teachers displaying 75%+ of applicable reading behaviors	55%	27%	50%	27%
General Teaching Behavior Index	89%	84%	89%	81%
Reading Teaching Practices Index	72%	52%	70%	57%
Teachers at least somewhat familiar with MT grammar	81%	85%	98%	96%
Teachers not comfortable providing instruction in MT	9%	8%	0%	2%

Table 5: General Best-Practice Teaching Behaviors, Grade 2

Category	General "best practice" teaching behavior	MTBMLE		Basa	
		BL	ML	BL	ML
Classroom Materials	Uses different instructional resources	93%	93%	98%	97%
	Uses materials besides textbooks	84%	85%	88%	89%
Opportunities for Reflection	Connects to previous lessons	53%	85%	41%	75%
	Asks probing questions	94%	78%	92%	70%
	Provides opportunities to apply learning	92%	85%	85%	74%
	Provides opportunities for critical thinking	87%	73%	89%	58%
Positive Learning Environment	Effective classroom management	96%	100%	99%	99%
	Treats students fairly	100%	100%	100%	100%
Other	Manages time effectively	98%	100%	100%	100%
	Assesses pupil learning	100%	56%	100%	58%
	Cooperative learning strategies	84%	70%	86%	68%

Table 6: Reading-Specific Best-Practice Teaching Behaviors, Grade 2

Category	Reading-Specific teaching behavior	MTBMLE		Basa	
		BL	ML	BL	ML
Opportunities for Developing Comprehension	Asks pre-reading questions	73%	46%	64%	58%
	Asks learners to act something out	65%	22%	51%	29%
	Uses multiple methods for comp.	81%	65%	90%	54%
	Asks questions to assess reading comp.	95%	89%	97%	95%
	Asks questions to assess listening comp.	85%	69%	91%	90%
	Allows learners to retell story	49%	32%	49%	32%
Opportunities for Learning to Decode and Spell Words	Encourages sounding it out	67%	42%	55%	46%
	Provides instructions to decode	53%	21%	51%	41%
	Asks learners to recognize letters	53%	21%	53%	31%
	Asks learners to recite alphabet	22%	11%	36%	21%
Positive Learning Environment	Avoids criticizing learners	96%	100%	100%	99%
	Encourages learners to help each other	80%	61%	74%	60%
Other	Uses reading-level appropriate activities	75%	67%	85%	67%
	Asks readers to read aloud	81%	53%	71%	57%
	Teaches learners new words	82%	67%	65%	70%
	Assigns individual reading	66%	29%	62%	45%
	Provides methods for good writing skills	83%	36%	74%	28%

Grade 3

Table 7: Teacher-level Outcomes, Grade 3

	MTBMLE		Basa	
	BL	ML	BL	ML
Early grade reading training, % of teachers attended	66%	58%	75%	76%
Early grade reading training, days attended	3.57	3.18	4.63	3.99
Class time in mother tongue, minutes	235.60	284.02	240.28	257.25
Class time in Filipino, minutes	51.60	55.86	53.00	52.45
Class time in English, minutes	51.61	52.79	58.48	52.08
Teachers displaying 75%+ of applicable general behaviors	86%	67%	85%	58%
Teachers displaying 75%+ of applicable reading behaviors	57%	30%	50%	28%
General Teaching Behavior Index	90%	84%	89%	79%
Reading Teaching Practices Index	76%	56%	71%	57%
Teachers at least somewhat familiar with MT grammar	81%	87%	97%	96%
Teachers not comfortable providing instruction in MT	6%	8%	1%	2%

Table 8: General Best-Practice Teaching Behaviors, Grade 3

Category	General "best practice" teaching behavior	MTBMLE		Basa	
		BL	ML	BL	ML
Classroom Materials	Uses different instructional resources	91%	92%	96%	98%
	Uses materials besides textbooks	83%	74%	89%	75%
Opportunities for Reflection	Connects to previous lessons	62%	84%	44%	79%
	Asks probing questions	95%	79%	93%	64%
	Provides opportunities to apply learning	93%	88%	86%	74%
	Provides opportunities for critical thinking	90%	73%	89%	52%
Positive Learning Environment	Effective classroom management	95%	100%	100%	100%
	Treats students fairly	100%	100%	99%	100%
Other	Manages time effectively	98%	100%	100%	100%
	Assesses pupil learning	100%	58%	100%	57%
	Cooperative learning strategies	85%	71%	85%	69%

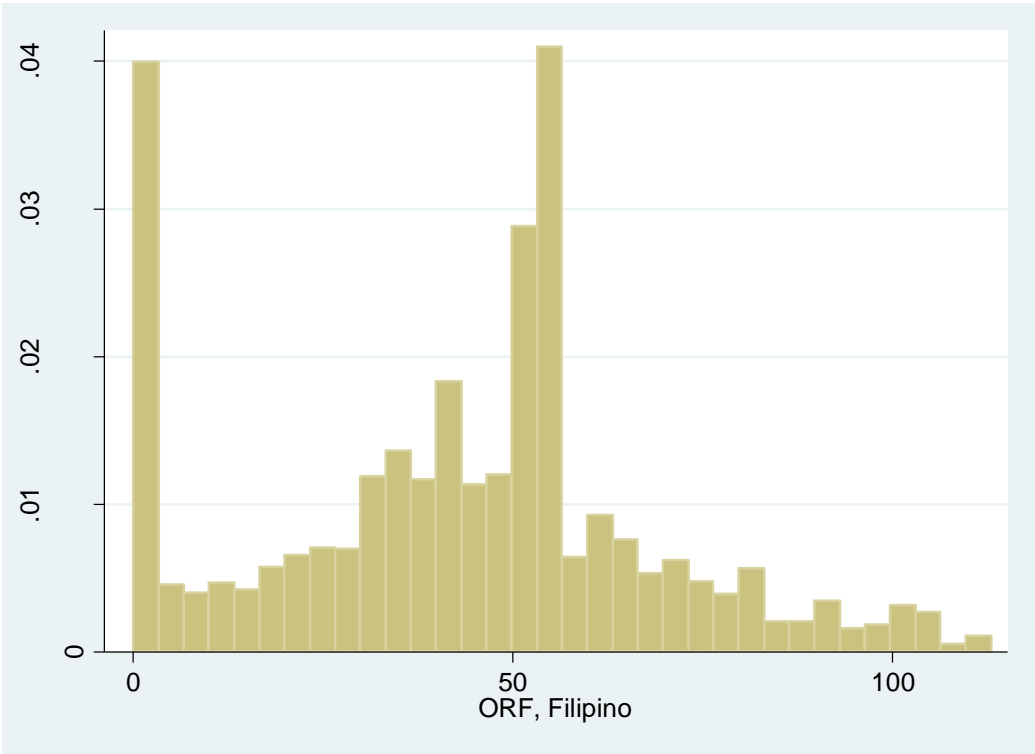
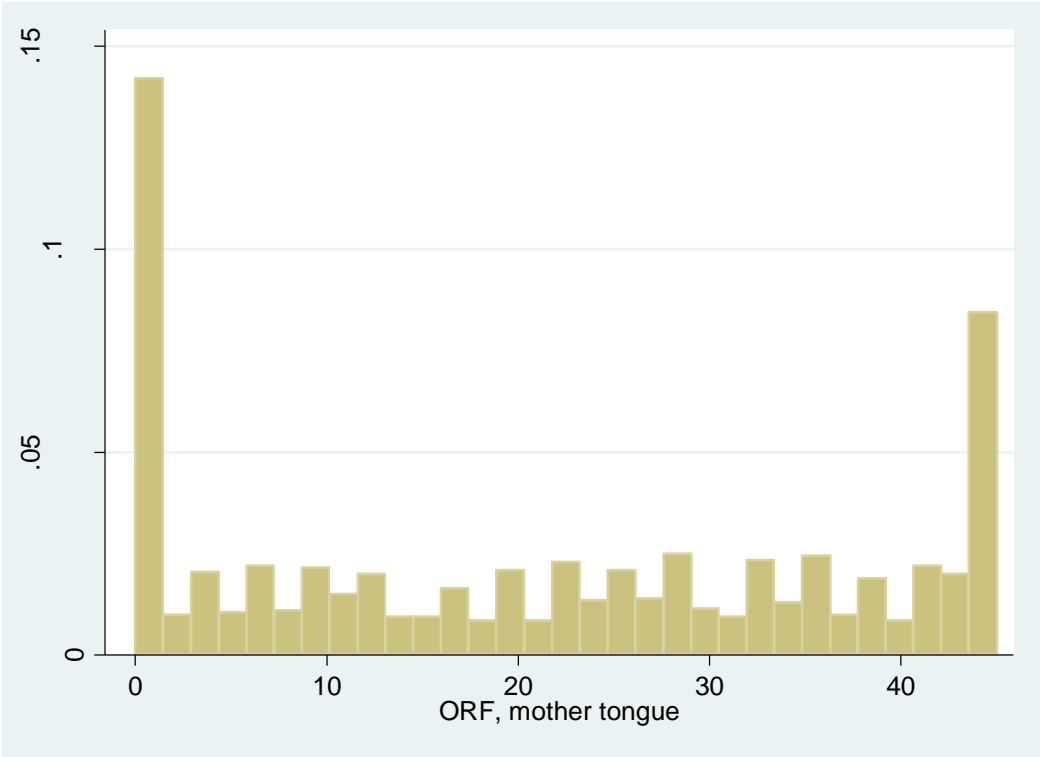
Table 9: Reading-Specific Best-Practice Teaching Behaviors, Grade 3

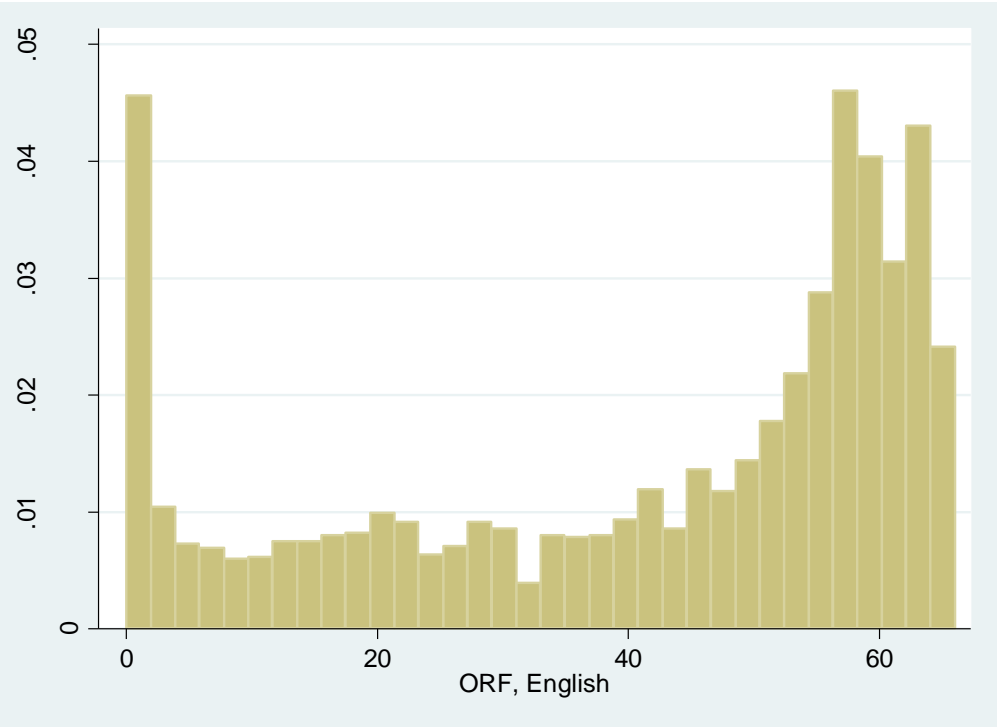
Category	Reading-Specific teaching behavior	MTBMLE		Basa	
		BL	ML	BL	ML
Opportunities for Developing Comprehension	Asks pre-reading questions	64%	50%	56%	47%
	Asks learners to act something out	48%	23%	44%	26%
	Uses multiple methods for comp.	84%	65%	92%	54%
	Asks questions to assess reading comp.	95%	95%	95%	89%
	Asks questions to assess listening comp.	95%	62%	89%	71%
	Allows learners to retell story	53%	31%	49%	30%
Opportunities for Learning to Decode and Spell Words	Encourages sounding it out	65%	42%	48%	46%
	Provides instructions to decode	50%	23%	36%	38%
	Asks learners to recognize letters	N/A	N/A	N/A	N/A
	Asks learners to recite alphabet	N/A	N/A	N/A	N/A
Positive Learning Environment	Avoids criticizing learners	95%	100%	99%	100%
	Encourages learners to help each other	79%	60%	77%	59%
Other	Uses reading-level appropriate activities	83%	68%	91%	63%
	Asks readers to read aloud	83%	58%	64%	62%
	Teaches learners new words	77%	61%	60%	73%
	Assigns individual reading	61%	34%	63%	44%
	Provides methods for good writing skills	85%	41%	80%	25%

ANNEX XIII. CORRELATIONS BETWEEN OBSERVED TEACHING PRACTICES AND ORAL READING FLUENCY (ORF) SCORE

Category	General "best practice" teaching behavior	Correlation with ORF
Classroom Materials	Uses different instructional resources	-.03
	Uses materials besides textbooks	.05
Opportunities for Reflection and Application	Connects to previous lessons	.09
	Asks probing questions	.13
	Provides opportunities to apply learning	.04
	Provides opportunities for critical thinking	.16
Positive Learning Environment	Effective classroom management	.08
	Treats students fairly	-.02
Other	Manages time effectively	.03
	Assesses pupil learning	.04
	Cooperative learning strategies	.03
Category	Reading-Specific teaching behavior	
Opportunities for Developing Comprehension	Asks pre-reading questions	.03
	Asks learners to act something out	.04
	Uses multiple methods for comp.	.07
	Asks questions to assess reading comp.	.02
	Asks questions to assess listening comp.	.03
	Allows learners to retell story	.07
Opportunities for Learning to Decode and Spell Words	Encourages sounding it out	.04
	Provides instructions to decode	.03
	Asks learners to recognize letters	.07
	Asks learners to recite alphabet	.12
Positive Learning Environment	Avoids criticizing learners	.06
	Encourages learners to help each other	.05
Other	Uses reading-level appropriate activities	.07
	Asks readers to read aloud	.11
	Teaches learners new words	.03
	Assigns individual reading	.14
	Provides methods for good writing skills	.07

ANNEX XIV. DISTRIBUTION OF ORAL READING FLUENCY (ORF) SCORES AT MIDLINE





ANNEX XV-DISCLOSURE OF CONFLICTS OF INTEREST

The evaluation team members disclosed that they had no potential conflicts of interest to conduct this evaluation. Their Conflict of Interest forms are available upon request.

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